1954

CENSUS OF MINERAL INDUSTRIES

VOLUME II

AREA STATISTICS

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U. S. DEPARTMENT OF COMMERCE
Sinclair Weeks, Secretary

BUREAU OF THE CENSUS
Robert W. Burgess, Director

UNITED STATES
Census of Mineral Industries
1954

Volume II
AREA STATISTICS

Industry Statistics for Geographic Divisions,
States, and Counties

Prepared under the supervision of
MAXWELL R. CONKLIN
Chief, Industry Division

UNITED STATES GOVERNMENT PRINTING OFFICE
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This volume comprises the 1954 Census of Mineral Industries Area Bulletins, Series MI-101 thru MI-150 and related supplementary materials.

SUGGESTED IDENTIFICATION

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Preface

This is one of two volumes presenting final results of the 1954 Census of Mineral Industries. The conduct of this census depended on significant contributions from a large number of private and public organizations and individuals. Its success resulted particularly from the excellent cooperation of the approximately 32,000 mining companies in completing the appropriate report forms.

Many trade associations and hundreds of individual mining companies--large, medium, and small--as well as the Bureau of Mines, other Government agencies, and other users of statistics provided valuable assistance in determining the types of information which would be most useful. Among Government agencies other than the Bureau of Mines, especially important contributions were made by the Bureau of the Budget, the Federal Power Commission, the Bureau of Labor Statistics, the Tariff Commission, the Office of Business Economics, and the Board of Governors of the Federal Reserve System. The Advisory Council on Federal Reports provided valuable advice upon the feasibility of collecting various types of data and on ways to minimize the reporting burden for respondents. Support by the United States Chamber of Commerce, the National Association of Manufacturers, the American Mining Congress, and other business groups and timely publicity given to the minerals census (and other economic censuses) by the press, television, and radio aided materially in the collection of the reports.

The primary responsibility for the 1954 Census of Mineral Industries was centered in the Industry Division of the Census Bureau. Other divisions of the Bureau, particularly the Economic Operations Division, the Machine Tabulation Division, and the Administrative Service Division, also had important functions in the Census.

The Census of Mineral Industries was taken under the supervision of Maxwell R. Conklin, Chief of the Industry Division, and Vivian Eberle Spencer, Assistant Chief for Mineral Industries. The branch chiefs listed in the organization structure of the Division shown on the opposite page carried the principal responsibility for the major commodity areas for the minerals census within the Division. Other Industry Division staff which made very significant contributions to the preparation of report forms and instructions, the design of specifications for editing and coding the returns, the conduct of major contacts with respondents regarding the reports, analysis of coverage, and preparation and review of final text and tables were: for metal mining, William Cooper; for coal mining, Curtis O. Siegel; for crude petroleum and natural gas, Charles E. Hennig, Evelyn O. Denny, George R. Hopkins, and C. H. Wallace Sedgewick; for nonmetallic minerals (except fuels) mining, Sam Arnold. Evelyn O. Denny was also in charge of industry and commodity classification for the minerals census. Angela R. Daly was the Industry Division representative for preparation of publications.

The Bureau of Mines cooperated with the Census Bureau in conducting the 1954 Census of Mineral Industries. The Bureau of the Census is particularly indebted to the Bureau of Mines Office of Chief Statistician and Office of Chief Economist for their staff work in planning and conducting the census. Very valuable assistance and cooperation was provided by the Chiefs, Divisions of Anthracite, Bituminous Coal, Minerals, and Petroleum; and of the Divisions of Mineral Industries in the field offices; and by staff members of these divisions. The coal divisions and field offices of the Bureau of Mines made a major contribution in collecting a substantial proportion of the census reports on minerals, other than petroleum and natural gas, their employees acting as special agents of the Census Bureau. Much of the processing prior to machine tabulation of the anthracite and bituminous coal production reports, and of the bituminous coal distribution reports, was performed by the Bureau of Mines coal staff in Washington.

Processing of the 1954 Census of Mineral Industries reports in the Census Bureau was performed by the Economic Operations Division under the Supervision of Marion D. Bingham, Chief, and Irving Weiss, Assistant Chief of Processing. Charles Merzel was directly in charge of all mailing, collection, and processing in the Census Bureau and supervised a major portion of the preparation of final tables.

C. F. Van Aken was Chief of the Machine Tabulation Division and, in that division, Catherine M. Neafsey, Chief, Economic Section, and Emil Gorgovits were responsible for the machine tabulation procedures used in this census.

Julius Shiskin, Chief Economic Statistician in the Office of the Assistant Director for Statistical Standards, as well as Harold T. Goldstein and Irving Rottenberg of that office, contributed to the coordination of the Census of Mineral Industries with the Censuses of Manufactures and Business.

Robert H. Brooks, Chief of the Graphics Branch of the Administrative Service Division, was responsible for preparing the Census of Mineral Industries publications for reproduction. Elma D. Beynon and Ingrid L. Millison of the Statistical Reports Division reviewed text material and table forms.

1954 CENSUS OF MINERAL INDUSTRIES FINAL REPORTS

Volume I: SUMMARY AND INDUSTRY STATISTICS

Summary Statistics

Chapter

I. General Summary
II. Size of Establishments
III. Employment and Related Statistics
IV. Type of Organization
V. Power Equipment
VI. Energy, Water, and Selected Supplies
VII. Type of Operation

Chapters I–VII were also issued as separate reports in Bulletin Series MI–A through MI–G

Industry Statistics

Separate chapters for each of 29 groups of related industries. These chapters include, for approximately 70 individual industries, statistics on employment and payrolls, capital expenditures, fuels, electric energy, and power equipment as well as quantities and values of individual products made and supplies used. Included are 6 separate summary chapters for industry groups. (The 29 industry chapters were issued as separate reports in Bulletin Series MI–10A through MI–14J.)

Volume II: AREA STATISTICS

Chapters for each State, the District of Columbia, and Alaska and Hawaii. Detailed statistics by industry within State. General statistics for counties, and for selected counties by industry, with establishment counts for each industry within county. Water use by industry within State. (The State chapters were issued as separate reports in Bulletin Series MI–100.)

1954 CENSUS OF MANUFACTURES FINAL REPORTS

Volume I: Summary Statistics

Volume II: Industry Statistics

Volume III: Area Statistics

1954 CENSUS OF BUSINESS FINAL REPORTS

Volume I: Retail Trade—Summary Statistics
Volume II: Retail Trade—Area Statistics
Volume III: Wholesale Trade—Summary Statistics, and Public Warehouses
Volume IV: Wholesale Trade—Area Statistics
Volume V: Selected Service Trades—Summary Statistics
Volume VI: Selected Service Trades—Area Statistics

Central Business District Bulletins

CONTENTS

INTRODUCTION

	Page
1. Earlier Censuses of Mineral Industries	1
2. Publication of the 1954 Minerals Census Results	1
3. The Mineral Industries and other Segments of the Economy	1
4. Definition of the Mineral Industries	2
5. Industry Classification	2
6. Establishment Statistics	3
7. Coverage of the Census	3
8. Census Geographic Divisions	3
9. Cooperation with the Bureau of Mines	4
10. Census Mailing List	5
11. Census Report Forms	5
12. Comparison of 1954 and 1939 Census Report Forms	5
13. Establishment Location and Company Characteristics	6
14. Type of Operation	6
15. Number of Operating Companies	6
16. Persons Engaged	6
17. Monthly and Average Employment	7
18. Production and Development Worker Man-Hours	7
19. Wages and Salaries for the Year	7
20. Supplies and Related Costs, Contract Work, and Purchased Machinery	7
21. Specific Supplies Used	8
22. Minerals Prepared	8
23. Capital Expenditures	8
24. Individual Products	8
25. Shipments, Production, Custom Milling, and Net Shipments	8
26. Value Added in Mining	9
27. Horsepower of Equipment	9
28. Energy Used	10
29. Water Use	10
30. Loading Equipment	10
31. Output Per Man-hour	10
32. Ratio of Wages and Salaries to Value Added in Mining	11
33. Imputation of Data	11
34. Confidentiality of Data for Individual Companies	11
35. Abbreviations	11

GENERAL SUMMARY

Table		
1	Comparative Statistics for Mineral Operations in the United States: 1954, 1939, 1929, 1919, 1909, 1902, 1889, and 1880	A-5
2	Selected Statistics for the Mineral Industries in the United States, by Industry Group and Industry: 1954	A-6
3	Selected Statistics for the Mineral Industries, by Geographic Divisions and States: 1954	A-10
4	Comparative Statistics for Mineral Operations in the United States, by Industry: 1954, 1939, 1929, and 1919	A-12
5	Comparative Statistics for Mineral Operations in the United States, by Geographic Divisions and States: 1954 and 1939	A-22
6	Value of Shipments of Primary Products of the Mineral Industries Produced in all Industries and Value of Secondary Products and Services of the Mineral Industries in the United States, by Industry: 1954	A-26

STATES AND TERRITORIES

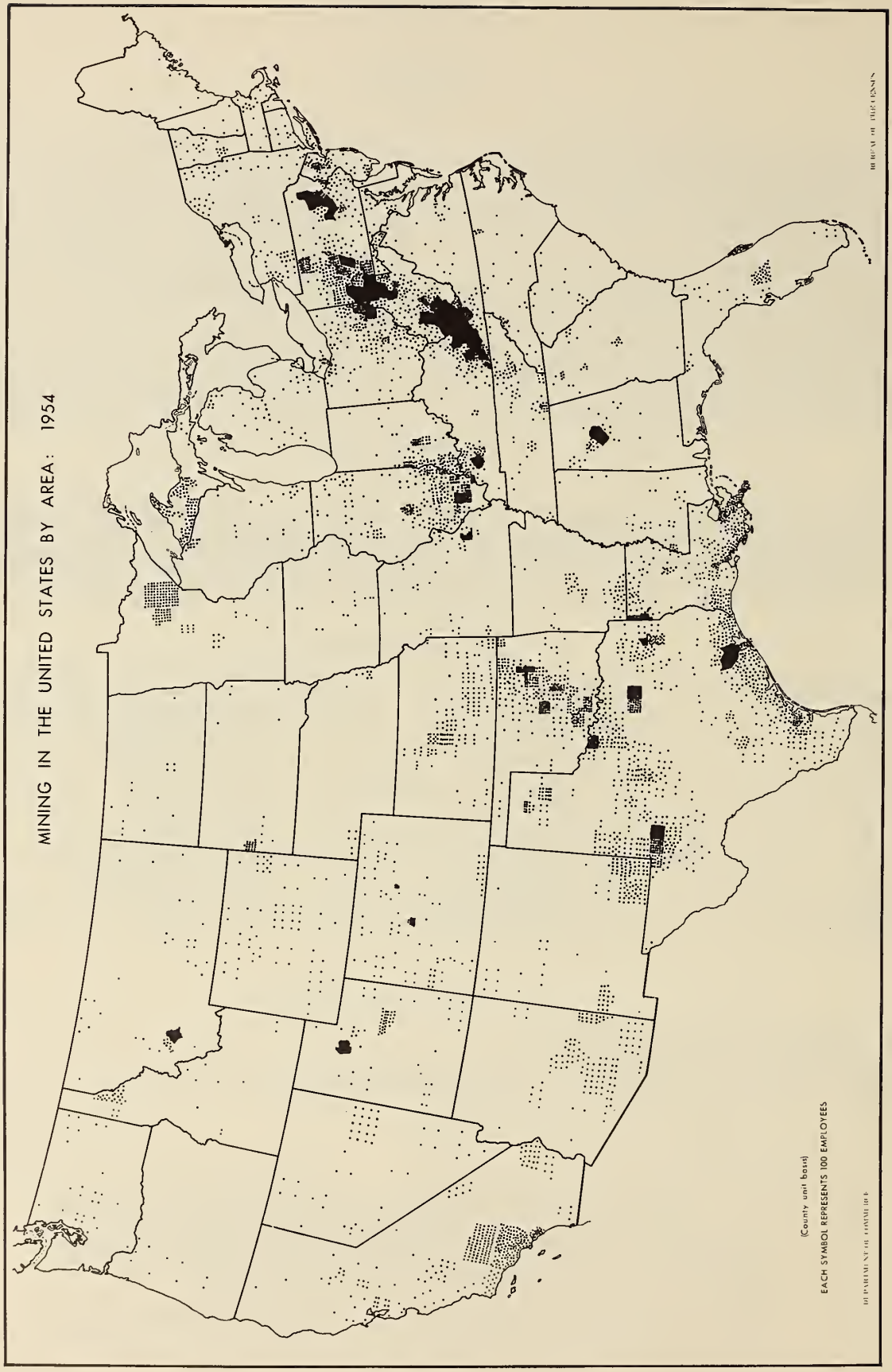
	Page		Page		Page
Alabama	101-1	Maine	118-1	Oklahoma	135-1
Arizona	102-1	Maryland	119-1	Oregon	136-1
Arkansas	103-1	Massachusetts	120-1	Pennsylvania	137-1
California	104-1	Michigan	121-1	Rhode Island	138-1
Colorado	105-1	Minnesota	122-1	South Carolina	139-1
Connecticut	106-1	Mississippi	123-1	South Dakota	140-1
Delaware	119-1	Missouri	124-1	Tennessee	141-1
District of Columbia	119-1	Montana	125-1	Texas	142-1
Florida	109-1	Nebraska	126-1	Utah	143-1
Georgia	110-1	Nevada	127-1	Vermont	144-1
Idaho	111-1	New Hampshire	128-1	Virginia	145-1
Illinois	112-1	New Jersey	129-1	Washington	146-1
Indiana	113-1	New Mexico	130-1	West Virginia	147-1
Iowa	114-1	New York	131-1	Wisconsin	148-1
Kansas	115-1	North Carolina	132-1	Wyoming	149-1
Kentucky	116-1	North Dakota	133-1	Alaska	150-1
Louisiana	117-1	Ohio	134-1	Hawaii	150-1

MAPS, CHARTS, AND APPENDIXES

Maps: Mining in the United States by Area: 1954 VI
State Maps - See Individual State Reports.
Chart: Mining Employment in the United States: 1860-1954 ..... A-3
Appendix A.--Minerals Census Report Forms and Punch Cards ..... App. A-1
Appendix B.--Provisions of Law Relating to 1954 Census of Mineral Industries ..... App. B-1

This volume includes preprinted portions of previously published State Bulletins (Series MI-101-151) and the general summary bulletin (Series MI-A). The pages of each report were numbered independently; page numbers of State reports consist of two parts, the first part being a State designation numbered in alphabetic order of the States. Thus, page 101-1 is page 1 of the report for the State of Alabama; page 149-11 is the last page of the report for the State of Wyoming (bulletin MC-149).

Corrections made after bulletins were issued are listed following the appendixes.


MINING IN THE UNITED STATES BY AREA: 1954
(County unit basis)
EACH SYMBOL REPRESENTS 100 EMPLOYEES

MAPS FOR STATES AND TERRITORIES

The maps appearing in the reports for each State or territory show the approximate distribution by county of the four major classes of mining operations: metal mining, coal mining, oil and gas extraction, and nonmetallic minerals (except fuels) mining. Separately indicated are mining operations included in manufacturing establishments. The incidence of mining has been measured in terms of employment. The approximate shift in incidence which would have resulted if value added in mining had been used as a measure is indicated by showing on each map the ratio of value added in mining to employment for the State or territory. The ranking of each State among all States in terms of mining employment and value of shipments is also shown. In general, data were not collected on the county distribution of contract service activities. However, the maps include data for such operations, distributed approximately on the basis of the distribution of the industries served.

INTRODUCTION

OUTLINE

1. Earlier Censuses of Mineral Industries
2. Publication of the 1954 minerals census results
3. The mineral industries and other segments of the economy
4. Definition of the mineral industries
5. Industry classification
6. Establishment statistics
7. Coverage of the Census
8. Census geographic divisions
9. Cooperation with the Bureau of Mines
10. Census mailing list
11. Census report forms
12. Comparison of 1954 and 1939 Census report forms
13. Establishment location and company characteristics
14. Type of operation
15. Number of operating companies
16. Persons engaged
17. Monthly and average employment
18. Production and development worker man-hours
19. Wages and salaries for the year
20. Supplies and related costs, contract work, and purchased machinery
21. Specific supplies used
22. Minerals prepared
23. Capital expenditures
24. Individual products
25. Shipments, production, custom milling, and net shipments
26. Value added in mining
27. Horsepower of equipment
28. Energy used
29. Water use
30. Loading Equipment
31. Output per man-hour
32. Ratio of wages and salaries to value added in mining
33. Imputation of data
34. Confidentiality of data for individual companies
35. Abbreviations

1. Earlier Censuses of Mineral Industries

The 1954 Census of Mineral Industries is the thirteenth such census of the United States. The first minerals census covered the year 1840. Such censuses have been conducted for the intervening years: 1850, 1860, 1870, 1880, 1889, 1902, 1909, 1919, 1929, 1935, and 1939. Present legislation provides for a Census of Mineral Industries to cover the year 1958 and every fifth year thereafter.

The scope and quality of the minerals censuses have varied. While many of the problems and concepts involved in such a census were recognized early, the difficulties of locating mineral operators and the meager records often maintained impaired the quality of the first few censuses. Beginning with 1880, however, fairly comparable statistics have been available. The most comprehensive previous censuses are those covering the years 1880, 1889, 1902, 1909, 1919, and 1939.

The 1954 minerals census was conducted jointly with the Censuses of Manufactures and Business (Wholesale, Retail, and Services). All of these censuses covered the continental United States, Alaska, and Hawaii. For 1954, as in previous years, most of the basic inquiries were common to the Censuses of Mineral Industries and Manufactures. The statistics published for mineral industries are generally comparable with those published for manufacturing industries, although in somewhat greater detail.

2. Publication of the 1954 Minerals Census Results

The 1954 Census of Mineral Industries final results are published in two volumes: Volume I, General Summary and Industry Statistics, shows comparative summary statistics for industries and States for such measures for mining establishments as employment; payrolls; capital expenditures; value of shipments; value added in mining; minerals received for preparation; supplies, fuels, electric energy, and water used; cost of contract work; and horsepower of power equipment. Selected industry statistics are shown by size of establishment and by type of operation. Separate reports containing detailed industry figures are included for 22 groups of industries and summary reports for 6 broader industry groups. Volume II, Area Statistics, shows for each State, and for major mining industries within the State, such statistics as indicated above, and less detailed figures for counties. A listing of number of establishments in each mineral industry by size and by county is also included for each State.

3. The Mineral Industries and other Segments of the Economy

The mineral industries in recent years have accounted for only about 2 percent of national income and have required employment of less than 2 percent of all gainful workers in the United States. Nevertheless, the mineral industries furnish an increasing proportion of the raw materials base of the economy. In 1950, the mining industries supplied 28 percent of all raw materials produced, agricultural materials, 65 percent, forest products, 6 percent, and fishery and wildlife products, 1 percent. This may be compared with averages for the first decade of this century when mineral products accounted for only 16 percent of all raw materials. Table A compares such figures for three periods in the last half century.

TABLE A.--PERCENTAGE DISTRIBUTION OF RAW MATERIALS PRODUCTION FOR SELECTED PERIODS: 1900-1952

Raw materials group	1900-1909 average	1920-29 average	1950-52 average
All raw materials.....	100	100	100
Minerals.....	16	23	29
Agricultural materials.....	70	67	65
Forest products.....	14	9	6
Fishery and wildlife products.....	1	1	1

Source: U. S. Bureau of the Census. Raw Materials in the United States Economy: 1900-1952 (Working Paper No. 1, 1954)

Production of minerals in the United States requires a relatively much greater expenditure of capital and equipment than is needed for the manufacturing industries. Although value added in mining in 1954 amounted to less than 9 percent of total value added for mining and manufacturing combined, new capital expenditures in the mineral industries were 25 percent of the total for mining and manufacturing, and horsepower of power equipment, excluding highway-type equipment, 21 percent of the total. (See Table B.) The crude petroleum and natural gas extraction industries accounted for 21 percent of these new capital expenditures. (In comparing figures in Table B, it should be noted that value added in mining includes a measure of value added in the development of mineral properties, see section 26, and capital expenditures include expenditures for development of mineral properties, see section 23.)

TABLE B.--VALUE ADDED, EMPLOYMENT, NEW CAPITAL EXPENDITURES, AND HORSEPOWER OF EQUIPMENT IN MINERAL AND MANUFACTURING INDUSTRIES: 1954

Item	Mineral industries		Manufacturing industries	Mineral industries as percent of mineral and manufacturing industries	
	All mining	Crude petroleum and natural gas extraction only		All mining	Crude petroleum and natural gas extraction only
Value added.....$1,000,000..	11,546	7,674	116,913	9.0	6.0
New capital expenditures.....do..	2,614	2,157	7,818	25.1	20.7
Employment.....1,000..	786	316	16,126	4.6	1.9
Horsepower of power equipment:					
Including highway-type.....do..	40,711	20,101	(NA)	(NA)	(NA)
Excluding highway-type.....do..	29,351	12,939	108,362	21.3	9.4

NA Not available.

4. Definition of the Mineral Industries

The minerals census covers all establishments classified in Division B--Mining, according to the Standard Industrial Classification of the Bureau of the Budget (see Standard Industrial Classification Manual, Volume II, Nonmanufacturing Industries, Executive Office of the President, Bureau of the Budget, May 1949). The definition of this division provides that it includes all establishments primarily engaged in mining. This term is used in the broad sense to include the extraction of minerals occurring naturally: solids, such as coal and ores; liquids, such as crude petroleum; and gases, such as natural gas. The term "mining" is also used in the broad sense to include quarrying, well operation, milling (crushing, screening, washing, flotation, etc.), and other preparation needed to render the mineral marketable. Exploration is included as is the development of mineral properties. Contract services performed in the development of mineral properties are classified separately but within this division.

Mining operations were classified by industry, on the basis of the principal mineral produced or, if there was no production, on the basis of the principal mineral for which exploration or development work was in process. The recovery of material from culm banks, ore dumps, and other waste minerals piles was classified with the appropriate mining industry according to the mineral product recovered.

Mineral preparation plants are usually operated together with mines or quarries and frequently no separate records for them are maintained. All such preparation plants are included in the scope of the minerals census. In general, separately operated preparation plants, whether they process minerals for the account of the operator or on a custom or toll basis for others, are also included in the minerals census. Coal cleaning and sizing plants operated at mines or as separate establishments are so included. However, the crushing, grinding, or otherwise treating of certain nonmetallic minerals (except fuels) at separately operated plants is included in the Census of Manufactures.

Contract hauling (except out of open-pits in conjunction with mining) is excluded from the 1954 minerals census.

Statistics on mining operations which are carried on as secondary activities at manufacturing or other nonmining establishments (such as clay pits at clay products plants or sand and gravel operations at ready-mixed concrete plants) are not within the scope of this census. However, certain information on these operations has been obtained in the 1954 Censuses of Manufactures and Business, and is included in some of the summary and industry reports and in the State reports. Wherever such inclusion occurs, it is clearly specified.

All blast furnaces; metal smelters; metal and petroleum refineries; plants manufacturing cement, brick, tile, and pottery; and plants engaged in dressing or polishing stone are classified in the manufacturing industries. Separate reports were obtained and included in the minerals census for the few ore dressing plants operated in conjunction with smelters and for the few natural gas liquids recovery plants operated as part of chemical establishments.

5. Industry Classification

The industry classifications used in this Census are those specified in the Standard Industrial Classification. This classification divides the "Mining" industries into five Major Groups: Metal mining; Anthracite mining; Bituminous coal and lignite mining; Crude petroleum and natural gas extraction; and Mining and quarrying of nonmetallic minerals, except fuels. These five major groups are divided into 20 subgroups and into 71 individual industries. Table C shows the relative magnitude of the 5 major groups in terms of value added in mining and employment.

TABLE C.--VALUE ADDED AND EMPLOYMENT IN THE MINERAL INDUSTRIES, BY MAJOR INDUSTRY GROUP: 1954

Industry group	Value added in mining		Employment	
	Million dollars	Percent of total	Thousand employees	Percent of total
All mineral industries	11,546	100	786	100
Metal mining.....	1,076	9	100	13
Anthracite mining.....	197	2	37	5
Bituminous coal and lignite mining.....	1,418	12	219	28
Crude petroleum and natural gas extraction.....	7,674	67	316	40
Nonmetallic minerals (except fuels) mining.....	1,182	10	113	14

Separate general statistics are published for all but three of the SIC industries. Separate statistics for two of the SIC industries could not be published without approximately disclosing the operations of individual companies, and in 1954 there were no establishments classified in a third industry. Selected statistics are published for certain subindustries, such as oil- and gas-field exploration services, glass sand, and asbestos. The definitions of these industries and subindustries are included in the introductory texts of the pertinent industry reports.

The industry and subindustry classifications used in the 1954 minerals census are, in general, the same as the industry classifications used in the 1939 minerals census. The most significant departure in 1954 is the exclusion from the mining census of data for certain mining operations performed in conjunction with manufacturing or wholesale trade processes and operated as part of manufacturing or trade establishments. These departures are described in detail in the appropriate industry reports.

6. Establishment Statistics

The Census of Mineral Industries obtains data, on the basis of an entire establishment, for the output and shipments of mineral products; operating and development costs; and labor, mechanical equipment, and materials requirements. Because of the nature of most operators' records, these data necessarily include the secondary products of the establishment as well as the primary products which determine the industry classification. Thus, some bituminous coal mines also produce clay, many oil wells also produce gas, silver ores contain significant quantities of copper, lead, zinc, gold, and other metals. Mines producing significant quantities of two or more different minerals are classified according to the mineral of greatest value (not tonnage) shipped during the year. A mine producing ores containing both silver and lead, for instance, is classified as a silver mine if the silver contained exceeds in value the lead content and vice versa. In most mining industries, however, the production of secondary minerals is of little statistical importance. This differs from the situation in manufacturing where about half of the industries have secondary production amounting to 10 percent or more of total shipments.

Operating companies were instructed that a mineral establishment, for purposes of the census report, is generally defined as a single physical location where mineral operations are conducted; for example, a mine only, a mine and preparation plant, or a preparation plant only. An establishment in this census, in general, represents workings at a given locality in which operations are conducted as a unit or are unified by common management or joint handling of some part of the mining or preparation process. Individual shafts, openings, or sites, however, are not necessarily considered as individual establishments. In some areas separate reports were requested for open-pit and underground mines.

For oil- and gas-field operations and contract services, reports were required for units somewhat different from the "establishment" reporting unit used for other types of mining. Only one report was required for all oil- and gas-field operations of a reporting company in each State. (However, information on employment and oil production was included in this report on a county basis.) For contract service operations, only one report was required for all mineral contract services of a company in continental United States and its territories of Hawaii and Alaska.

In practice, some flexibility was allowed in the application of the establishment definition in specific industries. Where a company did not keep separate records for two or more establishments engaged in the same type of activity and located within the same State and county, a consolidated report was usually accepted and the operations counted as a single establishment. The most significant occurrence of such consolidated reports was in iron ore mining. Separate reports were usually furnished for open-pit and underground operations, but some consolidated reports were made for most industries, and such consolidation becomes very important in the anthracite industry.

Establishment counts shown in the 1954 Census are closely comparable with those for most earlier years. However, in some years, such as 1929 and 1919, consolidated reports covering two or more operations appear to have been accepted to a greater extent than in 1954.

7. Coverage of the Census

The 1954 Census of Mineral Industries excludes very small establishments and certain noncommercial operations. The small establishments excluded represent those for which each of the following three items amounted to less than $500 for the entire year: (1) value of products shipped and services performed for others; (2) expenses for wages, salaries, supplies, minerals received for preparation, fuel, purchased electric energy, contract work, and purchased machinery; and (3) capital expenditures for development and exploration of mineral properties, new construction and major alterations, and new and used machinery and equipment.

The cut-off for establishments covered in the 1954 census was lower than in other recent minerals censuses. For 1939 and 1929, in general, small establishments were excluded if each of three similar items amounted to $2,500, and for 1919, if value of products was less than $500 and expenditures for development work less than $5,000. For bituminous coal and lignite an output criteria of 1,000 tons was used in these three censuses. For 1939, common sand and gravel operations were excluded if they produced less than 15,000 tons of sand and gravel and had expenses of less than $15,000. For 1929, common sand and gravel establishments producing less than 25,000 tons were excluded, and this industry was not covered in censuses prior to 1929. Minima for size of establishment included were not provided for earlier censuses.

The production of minerals, particularly stone, sand, and gravel, by Federal, State, and local governments is excluded from the census. Also excluded is some production of these items by highway contractors who do not maintain separate records for sand and gravel production. The census includes, however, mining establishments operated entirely to serve other establishments of the same company, such as coal mines serving only coke ovens operated by the same company, oil and gas wells serving only refineries or public utilities owned by the same company, and copper mines and mills where all of the ore is transferred to a company owned smelter.

The 1954 Census of Mineral Industries covered establishments meeting the value criteria whether or not they had employees. The mailing lists available for establishments with no employees, such as establishments for which all labor was furnished by proprietors or contractors, were somewhat less complete than for those with employees. However, it is believed that in most areas such establishments were included where they met the specified criteria. Specific limitations in such coverage are discussed in the separate industry texts.

Establishments reported as having no employees accounted for only about one percent of the value of shipments reported for all mineral industries for 1954, but represented 16 percent of all establishments included in the census tabulations and accounted for 5 percent of new capital expenditures. Establishments without employees were most important in certain metal mining industries, and in the anthracite, crude petroleum and natural gas, common clay, mica, pumice and pumicite, and peat industries. Table D shows the relative importance of such establishments by industry groups.

In general, it is believed that the 1954 minerals census reports provided essentially complete coverage of production and development operations. However, the coverage was probably somewhat less complete for the crude petroleum and natural gas industries and for anthracite. Only about 96 percent of the total shipments of oil, and possibly only 95 percent of the total shipments of gas, were covered. For anthracite only about 95 percent of the workers in the industry appear to have been reported, but estimates for such unreported operations are included. The special problems faced in covering these industries, and details on the apparent coverage attained, are discussed in the special texts for Crude Petroleum and Natural Gas and for Anthracite Mining. Undercoverage of the oil and gas industry appears to have reduced the over-all minerals census coverage to between 97 and 98 percent of the estimated total value of shipments. However, this undercoverage is more significant for certain States, particularly for Kansas, Arkansas, and Oklahoma where the apparent coverage of all mineral operations in the State was between 94 and 95 percent.

8. Census Geographic Divisions

In order to present census data at a level intermediate between the United States and the individual 48 States, the Census Bureau has used regional groupings for over a century. Beginning with the 1909 Census of Mines and Quarries, the present nine geographic divisions have been used.

TABLE D.--NUMBER OF ESTABLISHMENTS, VALUE OF SHIPMENTS, AND NEW CAPITAL EXPENDITURES FOR ESTABLISHMENTS WITH NO EMPLOYEES, AS PERCENTS OF TOTALS FOR ALL ESTABLISHMENTS IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUPS: 1954

Industry groups	Number of establishments	Value of shipments	New capital expenditures
All mineral industries	16	1.2	5.1
Metal mining	42	0.6	3.2
Iron ores	7	0.5	0.2
Copper ores	41	0.1	3.5
Lead and zinc ores	37	0.3	18.1
Gold and silver ores	51	1.4	10.2
Bauxite	4	[1]	0.3
Ferro-alloy ores, except vanadium	63	3.0	4.2
Metal mining contract services	5	[1]	[1]
Miscellaneous metal ores	29	[2]1.1	6.1
Anthracite mining	46	9.9	5.8
Bituminous coal and lignite mining	8	0.5	0.1
Crude petroleum and natural gas extraction	11	1.1	5.6
Crude petroleum and natural gas	17	1.5	6.0
Natural gas liquids	1	[1]	2.7
Oil and gas field contract services	2	0.1	[1]
Nonmetallic minerals (except fuels) mining	15	0.7	3.6
Dimension stone	9	1.5	.....
Crushed and broken stone	5	0.4	0.3
Sand and gravel	12	0.9	0.7
Clay, ceramic, and refractory minerals	21	2.6	9.9
Natural abrasives, except sand	28	2.3	3.4
Chemical and fertilizer mineral mining	27	0.2	11.7
Nonmetallic minerals (except fuels) contract service	6	0.3	0.3
Miscellaneous nonmetallic minerals (except fuels)	51	2.5	2.7

[1]Less than 0.05 percent.
[2]Excludes figures for the Uranium-radium-vanadium ores industry.

Not only are these groupings convenient for the summary presentation of census statistics below the United States level, but they are needed to present uniform geographic information for those individual industries in which application of the Census disclosure law precludes the publication of individual State figures. The relative importance of the mineral industries in 1954 among States and geographic divisions is shown in Table E.

9. Cooperation with the Bureau of Mines

The Bureau of the Census cooperated with the Bureau of Mines, United States Department of the Interior, in conducting the 1954 minerals census for industries for which the Bureau of Mines had been conducting annual commodity surveys. The purpose of this cooperation was to avoid duplicate canvassing of respondents for production statistics, and to make sure that all mines on Bureau of Mines mailing lists were covered.

TABLE E.--VALUE ADDED IN MINING BY GEOGRAPHIC DIVISIONS AND STATES: 1954

Division and State	Value added in mining (million dollars)	Percent	Division and State	Value added in mining (million dollars)	Percent	Division and State	Value added in mining (million dollars)	Percent
United States, total	11,546	100.0	West North Central--Con.			West South Central	5,210	45.1
New England	32	0.3	Missouri	57	0.5	Arkansas	108	0.9
Maine	2	[1]	North Dakota	7	0.1	Louisiana	985	8.5
New Hampshire	2	[1]	South Dakota	22	0.2	Oklahoma	584	5.1
Vermont	11	0.1	Nebraska	29	0.3	Texas	3,533	30.6
Massachusetts	9	0.1	Kansas	359	3.1			
Rhode Island	1	[1]				Mountain	1,305	11.3
Connecticut	8	0.1	South Atlantic	761	6.6	Montana	83	0.7
			Delaware, Maryland, District of Columbia	18	0.2	Idaho	39	0.3
Middle Atlantic	767	6.6				Wyoming	258	2.2
New York	97	0.8				Colorado	205	1.8
New Jersey	39	0.3	Virginia	89	0.8	New Mexico	338	2.9
Pennsylvania	632	5.5	West Virginia	513	4.4	Arizona	178	1.5
East North Central	813	7.0	North Carolina	31	0.3	Utah	152	1.3
Ohio	167	1.4	South Carolina	10	0.1	Nevada	53	0.5
Indiana	85	0.7	Georgia	33	0.3			
Illinois	375	3.3	Florida	67	0.6	Pacific	1,350	11.7
Michigan	149	1.3				Washington	22	0.2
Wisconsin	37	0.3	East South Central	521	4.5	Oregon	13	0.1
West North Central	786	7.0	Kentucky	272	2.4	California	1,315	11.4
Minnesota	290	2.5	Tennessee	61	0.5			
Iowa	22	0.2	Alabama	94	0.8			
			Mississippi	94	0.8			

[1]Less than 0.05 percent.

The Bureau of Mines acted as collection agent for about one-third of the establishment reports for the 1954 Census of Mineral Industries, including almost all companies having only one establishment in the metal mining and coal areas and about one-half of such reports in the nonmetallic minerals, except fuels, industries. The Bureau of the Census collected all reports for multiestablishment companies and all reports for the crude petroleum and natural gas, stone, clay, and certain other nonmetallic minerals industries.

Bureau of Mines Field Office employees, acting as special agents of the Bureau of the Census, received the Census reports for the metal mining and nonmetallic minerals, except fuels, industries. They also conducted the followup of delinquents and performed certain initial processing of the reports. For coal, the Bureau of Mines used its Washington office employees to perform similar functions, again acting as special agents of the Census Bureau. For the coal industries the Bureau of Mines also had a major responsibility in the editing of the reports.

10. Census Mailing List

The basic mailing list for the 1954 Censuses of Business, Manufactures, and Mineral Industries comprised all employers (except farmers, State and local governments, and a few other classes) who made one or more quarterly payments in 1954 under the Federal Insurance Contributions Act. The list was obtained from the Internal Revenue Service of the Treasury Department. It contained all of the information necessary for mailing of the Census questionnaires except the industry classification of the employer.

The IRS list was compared with various lists carrying the industry identification necessary for selection of the appropriate Census questionnaire. The information common to both the IRS list and certain of the classified lists was the Social Security employer identification number.

The principal source of industry codes was the "employer master file" of the Bureau of Old Age and Survivors Insurance of the Social Security Administration. The latter file was supplemented by Bureau of Mines lists, which also furnished the principal source of names, addresses, and industry classifications for establishments without employees. In addition, for the oil and gas industries, it was supplemented by a list from the Petroleum Administration for Defense, by a list from the Federal Power Commission, and by certain trade association lists.

In order to correct and consolidate these lists, and to provide information on individual establishments operated by multiunit companies and additional names and addresses of contractors, limited precanvasses were conducted in the autumn of 1954.

In the 1954 Census the report forms were distributed and returned by mail. Personal or telephone contact was made only when the operator did not respond to the initial request or follow-up letter. All forms were mailed from Washington and, except for forms collected by the Bureau of Mines, the follow-up was controlled from Washington.

At various stages of processing of the reports coverage checks were conducted to determine whether establishments on the original list were represented in the processing stage under study. Moreover, many comparisons were made with mailing lists being used currently by the Bureau of Mines. These checks indicated virtually complete mailing of reports to all names on the mailing list. For omissions discovered in these checks, either the missing reports were located or new reports obtained.

11. Census Report Forms

Only one report form was required, in general, for the operations of each establishment. The report forms used were adapted to the 71 industries classified in mining, 34 different establishment forms being provided for the 1954 minerals census. These included 26 standard forms used for all large and multiestablishment companies and 6 short forms used for certain small establishments. (Only about 1,500 of the approximately 38,000 reports in the minerals census were tabulated from short forms.) The same basic information was requested in all establishment report forms. However, the inquiries in the forms were adapted in terminology and detail for each form.

In addition to the establishment report forms, a few special purpose forms were provided. These included: (1) a form on distribution of bituminous coal and lignite required for each coal district in which a company operated coal mines and (2) a form on offshore oil and gas operations required for each State in which a company performed such operations. In addition, there was a form used throughout the 1954 Censuses of Business, Manufactures, and Mineral Industries for separately operated central offices and auxiliary units.

12. Comparison of 1954 and 1939 Census Report Forms

The inquiries on the 1954 census forms were very similar, in general, to those on the 1939 forms. Some new information was obtained, however, and there were some differences in the way basic information was requested:

(a) The 1954 report forms requested quantity and value of shipments in all cases and only occasionally also provided for information on production, whereas output data for 1939 were requested in terms of production for all industries and data on shipments were not requested in most cases. This change is, in part, a recognition that respondents records are most commonly in terms of shipments and these records will be used in supplying the information whether production or shipments data are requested. For most mineral industries stocks of minerals ready for market are small and it is probable that the change from production to shipments introduced very little incomparability in the series for quantity and value of output.

(b) For 1954, employment data were requested in terms of "production and development workers" and "all other employees," whereas, for 1939, the terms "wage earners" and "salaried employees" were used. Similar definitions were provided for both years, however, for these two classes of employees. The change in terminology was similar to that made in manufacturing after 1939 and was made to emphasize that the classification was intended to distinguish classes of work performed rather than methods of payment. It is believed that the difference in definition had no significant effect on the comparability of the 1954 and earlier statistics.

(c) Employment data were requested for only four selected months for the Crude petroleum and natural gas extraction industries for 1954, but 12 monthly figures were requested for other mineral industries in recognition of the relatively high seasonal characteristics of these industries. Figures for 12 months were requested for all industries in the 1939 census.

For 1954, the data by month were obtained for all employees. For 1939, the monthly figures were for wage earners only and data for salaried employees were requested for the payroll period ended nearest October 14.

(d) Separate information was obtained for the first time, and for all industries, for man-hours devoted to development and exploration work.

(e) Quantity and value of minerals received for preparation were obtained for almost all industries in 1954, and in nearly all of the report forms shipments of crude and prepared minerals were segregated. These data made it possible to publish both gross and net shipments for most industries in 1954. Data on minerals received for preparation were not obtained for 1939, and for most industries only figures for net production could be published. (See also section 25.)

(f) Capital expenditures for development and exploration of mineral property were included for 1954, as they had been only twice before, for 1929 and 1919. (For 1929, however, no data

were obtained on oil and gas field operations.) Figures for other capital expenditures were comparable with those obtained for 1939, except that separate data were requested for 1954 on expenditures for "preparation plant construction" and for "other construction." The 1954 census obtained, for the first time, information on total capital expenditures. It also obtained the cost of purchased machinery installed, included only once before, in the 1929 census. These figures for total capital expenditures and cost of purchased machinery made it possible to compute the first fairly adequate measure of value added in mining (see section 26-Value added in mining).

(g) The first information on water used in all mineral industries was obtained in the 1954 census. The quantity and cost of explosives and of steel mill shapes and forms were also included for the first time for all metal mining and coal mining industries; and for the coal industries the first data were collected on the cost of round and hewn woods products and stumpage, and on the quantity of rough lumber produced for use at the same establishment.

13. Establishment Location and Company Characteristics

Tabulations of Census data are provided by geographic area and a limited amount of information was also compiled on company affiliation characteristics. To permit adequate classification in this manner, specific questions were included on the location of the mine and any associated mineral preparation plant. Information was requested on whether the company was incorporated, or was an individual proprietorship, partnership, or other type of organization; on company affiliation; and on the predecessor or successor, if the operation changed hands during 1954.

All 1954 industry forms requested the Social Security employer identification number. This facilitated efforts to assure that all mining establishments included in the social security records were included in the census and helped to avoid the inclusion of duplicate reports.

14. Type of Operation

The type of operation statistics in all industry reports are based primarily on replies to a check box inquiry which listed the usual mining and mineral preparation methods used in a particular industry. The respondent was asked to check each method used in the establishment reported and to underscore the dominant method. Wherever possible, separate statistics are provided on establishments using underground mining methods, using a combination of underground and open-pit methods, and using open-pit methods only. For selected industries, separate statistics are provided by type of underground mining, such as for establishments having as the dominant method open stoping, shrinkage stoping, square setting, or block caving. Separate figures are provided, where possible, for mines with and without preparation plants; and, for establishments with preparation plants, classified by the dominant preparation method, such as crushing, washing, flotation, or gravity concentration. Separate statistics are also provided on producing and nonproducing operations, an establishment being defined as nonproducing if no mineral products were shipped during the year. For the crude petroleum and natural gas industries, details were obtained on the type of wells drilled and operated and reports were classified on the basis of whether they represented oil wells only, both oil and gas wells, or gas wells only, on the basis of whether or not they included drilling, as well as on the basis of whether part of the operations were performed by contractors or on contract for others.

15. Number of Operating Companies

For the purpose of this census, an operating company is defined as a corporation, individual proprietorship, partnership, cooperative, or other organization, regardless of size, directly engaged in production or development activities at one or more mineral establishments. An operating company may own the property operated or be the lessee of such property or operate for the account of others on a contract or fee basis. Regardless of the number of establishments operated by a company, or the number of States operated in, the company is counted only once in summary statistics. Hence, the sum of the detailed statistics for number of operating companies is usually greater than the statistics shown for group totals.

16. Persons Engaged

The employment statistics represent all full-time and part-time employees at the establishment who worked or received pay for any part of the pay period ending nearest the 15th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacation during these pay periods. Also included are employees of miners paid on a per ton, car, or yard basis. Excluded are employees at the mine but who were on the payroll of another employer (such as employees of contractors) and employees at company stores, boarding houses, bunk houses, and recreational centers. Also excluded are members of the armed forces, and pensioners carried on the rolls but not working during the period. Officers of corporations are included as employees; but proprietors and partners of unincorporated firms are excluded.

This total employment is divided into two functional classifications comparable with the basic classifications used for the manufacturing industries. (The manufacturing classification is based on the Bureau of the Budget's Standard Specifications for Employment Reports of November 1944.)

The instructions to mining companies for reporting these two employee classifications were as follows:

Production, development, and related workers--Employees up through the working foreman level engaged in manual work, using tools, operating machines, hauling materials, loading and hauling products out of the mine in mine cars or trucks, and caring for mines, plants, mills, shops, or yards. Included are exploration work, mine development, storage, shipping, maintenance, repair, watchmen services, auxiliary production for use at establishments (such as power plant), record keeping, and other services closely associated with these production and development operations at the establishment covered by the report. Gang and straw bosses and foremen who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and the men engaged by them and paid out of the total amount received by these miners, and other employees at the establishment but not on its payroll if paid directly through its own employees, such as superintendents and foremen. Supervisory employees above the working foreman level are excluded from this category.

All other employees--Nonproduction personnel at the establishment and above the working foreman level. These are engaged in such activities as supervision, sales, highway trucking (by employees not entering mines or pits), advertising, credit collection, clerical, and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria and medical), professional (such as engineers and geologists), and technical activities. Also included are force-account construction workers engaged in the construction of major additions or alterations to the plant who are utilized as a separate work force. (Workers engaged in regular maintenance and repair operations are not included here but are classified as "production, development, and related workers.")

Employees at an office located at or near the mining establishment are usually included in the mine report. Where such offices or auxiliary units were reported separately their employees are included in the totals for individual industries and the State tables for each industry, but are not classified by type of operation or by frequency class in frequency tabulations. These figures, classified by industry, are also shown separately in report A. This practice differs from that used in the Census of Manufactures, in which employment at central

administrative offices and auxiliary establishments were included in total manufacturing but not in individual industries.

In the mineral industries reports, besides these statistics on two types of employment, figures are shown on the total number of proprietors and firm members, and separately on the number of these who regularly performed production or development work.

17. Monthly and Average Employment

The average employment statistics represent, in general, averages of reported employment for the midmonth pay period for the 12 months of the year. However, the 1954 Census report forms for the crude petroleum and natural gas extraction industries requested employment figures for only four selected pay periods (midmonth employment in March, May, August, and November).

This latter approach was used for oil- and gas-field operations, as for most manufacturing industries, to simplify the schedule format and lighten the reporting burden of respondents, since for these operations it appears that the average obtained by using 4 months approximates very closely the average which would be obtained by using 12 pay periods. The mid-March, rather than mid-February, pay period was selected to agree with the pay period for which employment data are reported to the Bureau of Old Age and Survivors Insurance, thus permitting coordination of the Census and BOASI records.

This average employment for mines, based on 4 or 12 monthly figures, is generally comparable with employment statistics compiled for manufacturing and mining by other Government agencies but is lower than the measure used in annual accident and other reports to the Bureau of Mines. The latter measure represents "average number of employees on active days," excluding shut-down periods. To maintain comparability with the Bureau of Mines annual reports, the second measure was also provided for on the coal reports. In the case of anthracite for 1954, the average number of employees on active days exceeds the average for 12 months by about 25 percent.

18. Production and Development Worker Man-Hours

The total man-hours figures represent all man-hours of production and development workers (as defined in Section 16) which were worked on both active days on which there was production or development work and on inactive days when only watchmen, inspectors, repairmen, and other maintenance men were on duty. They include all man-hours worked or paid for at the mining operations, except hours paid for vacations, holidays, or sick leave, when the employee was not at the mine. Included are actual overtime hours, not straight-time equivalent hours. Man-hours of working proprietors are excluded.

The Census man-hour figures differ from those published monthly by the Bureau of Labor Statistics which cover all hours paid for, whether or not worked, and relate only to the payroll period ending nearest the middle of each month. They differ from man-hours collected by the Bureau of Mines which include data for all employees classified as exposed to accidents, rather than only production and development workers.

Census man-hour figures were collected separately by department, such as for work in underground mining and development, in open-pit mining and stripping, at surface shops and yards for the mine, and at preparation plants (including auxiliary works for these plants). For the oil and gas industries, separate figures were obtained for operating and maintaining wells, for drilling wells and rig building, and for exploration work. For industries in which there is a significant amount of dredge activity, separate figures were obtained for man-hours on floating equipment. A separate figure was also obtained on man-hours devoted to development and exploration work and charged to capital or depletion accounts.

Man-hours were well reported for the larger establishments, although the distribution by department was inadequately reported in some instances. Where total man-hours, or the distribution by department, were not reported and it was not feasible to obtain the information by correspondence, the data were estimated. Since such estimates were usually for small establishments, they have little effect on the validity of the statistics, except possibly those for small operations in the size of establishment tabulations.

19. Wages and Salaries for the Year

These items represent the gross earnings paid in the calendar year to all employees on the payroll of mining establishments, and are comparable with the definition of payrolls used for the Federal withholding tax. They include all forms of compensation such as salaries, wages, commissions, dismissal pay, all bonuses, vacation and sick leave pay, and compensation in kind; prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation; it excludes payments to the proprietor or partners, if an unincorporated concern. It excludes payments to members of the armed forces and pensioners carried on the active payroll of mining establishments. Also excluded are royalty payments to unions and costs of smithing, explosives, fuses, electric cap lamps, and mine supplies used in production and development work but charged to employees and deducted from their wages.

The Census definition of payrolls is that recommended to all Federal statistical agencies by the Bureau of the Budget. It should be noted that it does not include employers' Social Security contributions, or other nonpayroll labor costs such as employers' pension plans, group insurance premiums, and workmen's compensation. It should be noted also that these payrolls include wages for development and construction work which would be charged to the capital account.

As in the case of employment figures, the payrolls of separately reported offices and auxiliary units are included in the industry and State tables, but also shown separately by industry in report A.

20. Supplies and Related Costs, Contract Work, and Purchased Machinery

The 1954 Census report forms requested information on supplies, fuels, and electric energy used; on contract work done by others; and on purchased machinery installed for each establishment. These items included charges to both the current and capital accounts. The figures reported were to include items used during 1954 whether purchased, withdrawn from inventories, or received from other establishments of the company. For selected supplies and fuels and for electric energy both quantity and cost data were requested. The cost data refer to direct charges actually paid or payable (after discounts) for items used during the year. Freight charges and other direct charges incurred by the establishment in acquiring the items are included. Where the company's records did not show actual amounts used, they were asked to approximate use by adding purchases (or receipts) during the year to opening inventory and subtracting closing inventory.

Separate figures were obtained for (a) selected supplies for some industries; (b) the value of minerals received for preparation (see Section 12); (c) the amount paid for electric energy purchased; (d) the amount paid for all purchased fuels used for heat, power, or the generation of electricity; (e) the cost of contract work done by others; (f) the cost of products bought and resold in the same condition; and (g) the cost of purchased machinery installed. Supplies and equipment used in mine development and plant expansion and capitalized repairs, which are chargeable to fixed assets accounts, were included as were supplies furnished without charge to contractors for use at the mining operation and also supplies sold to employees for use at the establishment (see Section 19). No data were obtained on such costs as advertising, insurance, telephone, and research and consulting services of other establishments; or on overhead costs, such as depreciation charges, rent, interest, and royalties.

Under contract work, companies were instructed to report the total amounts paid or due for contract services performed

during the year, including payments for supplies and equipment furnished by the contractor incidental to this work. If part of the payment to contractors was in materials produced, the respondent was asked to estimate the value of the service performed. However, payments to miners paid on a per ton, car, yard, or footage basis were included under payrolls rather than under contract work (see Section 19).

Under purchased machinery, companies were instructed to report all machinery, equipment, and parts for renewals and repairs, including equipment installed in the mine or mill as well as mobile loading and transportation equipment.

21. Specific Supplies Used

In the 1954 minerals census, uniform quantity and cost data were obtained on the use of selected supplies. Comparable statistics on these items are not available for previous years. Collection of the supplies data was coordinated with the expanded manufactures statistics program for the 1954 Census, which obtained data on 230 materials for every industry that consumed appreciable quantities of them.

For the minerals census, data on the quantity and cost of explosives and of steel mill shapes and forms used were obtained for the metal mining industries and for coal mining, and also, for coal mining, data were obtained on the cost of round and hewn woods products and stumpage, and on the quantity of rough lumber produced for use at the same establishment. For the crude petroleum and natural gas industries, data were obtained on the quantity and cost of gas purchased for gas lift and repressuring.

22. Minerals Prepared

On report forms for almost all mineral industries, except the oil and gas and contract services industries, a uniform inquiry was included on minerals prepared at the reported establishments. Separate quantity figures were obtained on minerals prepared from three sources: (a) crude minerals mined at the establishment; (b) crude minerals received from other establishments of the company or purchased from others (quantity and cost); and (c) crude minerals received for preparation on a custom or toll basis (quantity and estimated value).

23. Capital Expenditures

In the 1954 Census, mining companies were asked to report expenditures made during the year for development and exploration of mineral properties, for new construction, and for machinery purchased at their operations that were chargeable to fixed-assets accounts of the mining establishments and were of a type for which depreciation, depletion, or Defense Minerals Exploration Administration accounts are ordinarily maintained. Capital expenditures during 1954 were to be determined as: additions completed during the year plus construction-in-progress at the end of the year minus construction-in-progress at the beginning of the year. Reported capital expenditures were to include work done on contract as well as by the mine forces. Expenditures for machinery and equipment were to include those made for replacement purposes, as well as those for additions to capacity. Excluded from such expenditures totals are costs of maintenance and repairs charged as current operating expense. Also excluded are expenditures for land and mineral rights.

Wherever applicable, separate figures were provided on expenditures for: (a) development and exploration of mineral property, (b) preparation plant construction and major alterations, (c) other construction and major alterations, (d) new machinery and equipment, and (e) used plant and used equipment acquired from others. The 1954 minerals census was the first to cover the totality of these items. However, for 1939, data were obtained on (b) and (c) combined and separately on (d) and (e). For 1929 and 1919, data were obtained on (a). "New capital expenditures" shown in certain tables consist of items (a) through (d) above. This figure is comparable with that shown for manufacturing and avoids the duplication inherent in including used equipment.

The census figures for capital expenditures differ from those based on the joint Office of Business Economics-Securities and Exchange Commission sample survey not only because of errors due to sampling but much more due to the differences in scope of the surveys. Whereas census figures cover all mining establishments, but exclude all establishments of reporting companies which are not classified in the mineral industries, the OBE-SEC figures are based on reports for an entire company, classified on the basis of its principal activities. For this reason many large metal mining and oil and gas establishments are included, for example, in the OBE-SEC tabulations as part of manufacturing. Both series, however, exclude expenditures at establishments owned by Federal or State Governments but operated under lease or contract by private companies.

24. Individual Products

In the 1954 Census of Mineral Industries, information on output of about 760 individual mineral product items was collected. The list of products for which separate information was collected was prepared after extensive consultation with industry and Government representatives. The detail provided for many industries was also greatly influenced by the type of detail usually collected in the Bureau of Mines annual surveys and needed by that agency to maintain comparability.

In general, figures were collected on both quantity and value of shipments. The shipments include commercial shipments and transfers of products to other operations of the same company. For products which are used to a significant extent within the same establishment for power or heat, and for minerals mined and prepared in the same establishment, total production or separate data on production for such uses were collected. Typically, production was also collected for products for which there are usually significant differences between total production and total shipments as a result of stock changes.

For contract service industries the amount received or due for services performed during 1954 was collected as a measure of output. For mine operators who also perform contract services the amount received for such services was added to the total value of products shipped to determine total "value of shipments" for each establishment.

Table 5 of each report for individual industries provides the national and regional total shipments from all industries for each of the products primary to the industries covered in the report. Wherever possible, it provides separate totals for the amount of each product made by the primary industry and the amount made by other industries.

25. Shipments, Production, Custom Milling, and Net Shipments

"Shipments" figures include all products physically shipped from the establishment during 1954, including material withdrawn from stockpiles, and products shipped on consignment, whether or not sold in 1954. Prepared material or concentrates include preparation from ores mined at the same establishment, purchased, received from other operations of the same company, or received for milling on a custom or toll basis. For products transferred to other establishments of the same company or prepared on a custom basis, the company was requested to report the approximate commercial value not merely the cost of producing the items. All values were requested f.o.b. the establishment reported.

The figures for "Value of shipments" of an industry include for all establishments classified in the industry: (a) the value of all "primary" products of the industry; (b) the value of "secondary" products which are primary to other industries; (c) the receipts for contract work done for others (except custom milling); and (d) the value of products purchased and resold without further processing. Receipts for custom milling are omitted from this total and shown separately to avoid duplication with the value of custom milled ores included in (a) or (b).

For industry and industry group totals some duplication is introduced by the inclusion of materials transferred from one

establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification; it represents gross shipments.

For years prior to 1954, data on shipments were not collected. Instead, the report forms requested data on the quantity and value of production. In general, the data for these years were edited to represent "net" production, excluding duplications due to mining and later milling of the same material.

Another source of duplication in the industry totals, particularly in the major group totals, for value of shipments is the inclusion of the cost of contract work performed by one establishment for another as well as the value of products produced by the assistance of this contract work. Only part of the contract work performed during a given year, however, results in production during that year. Another significant portion results in capital additions to the industry. It was not possible to segregate these two types of contract work in the census tabulations and the exclusion of all receipts for contract work in a computation of net shipments must be considered an over adjustment. Of the types of contract work classified in the mining contract services industries, only contract mining of minerals and contract pumping of wells would always warrant deduction as duplication in the value of shipments totals, and these items amounted to less than 5 percent of the total receipts for contract work by minerals establishments in 1954.

A third element of duplication in the total value of shipments for all mineral industries, and in the major group totals for the fuel producing industries, is the transfer of coal and natural gas from one mining establishment to another for use for power or heat. The total value of such fuels transferred for use in all mineral industries, however, was only $44 million, or less than 0.3 percent of the gross value of shipments for all mineral industries.

Table F shows, for major industry groups, gross shipments and two approximate computations of net shipments, the first adjusted only for the transfer of minerals from one establishment to another for preparation and the second adjusted also by exclusion of all receipts for contract work. This second adjustment, for the reasons indicated above, is made only in Table F, and nowhere else in the 1954 census reports.

TABLE F.--GROSS AND APPROXIMATE NET SHIPMENTS IN THE MINERAL INDUSTRIES, BY MAJOR INDUSTRY GROUP: 1954

Industry group	Gross shipments (million dollars)	Net shipments (million dollars)	
		Adjusted for transfer of minerals	Adjusted for transfer of minerals and for contract work
All mineral industries.....	14,907	14,166	12,492
Metal mining.....	1,506	1,361	1,321
Anthracite mining.....	408	291	248
Bituminous coal and lignite mining.....	2,068	[1]1,806	1,787
Crude petroleum and natural gas extraction.....	9,342	9,169	7,613
Nonmetallic minerals (except fuels) mining.....	1,582	1,539	1,523

[1]Adjusted also to exclude duplication of coal transferred to other establishments in the same industry for resale without preparation.

26. Value Added in Mining

This measure is shown for the first time in Census publications for 1954. It is computed for 1954 by subtracting the cost of supplies, fuels, purchased minerals received for preparation, electric energy, contract work, and purchased machinery from the value of shipments and capital expenditures. This statistic avoids the duplication in value of shipments which results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons it is considered to be the best value measure for comparing the relative economic importance of mining among industries and geographic areas.

"Value of shipments" used in this calculation includes the shipments of all products made in the mining establishment, together with receipts for contract work done for others. "Capital expenditures" used includes expenditures for development of mineral properties as well as for new construction and major alterations of preparation plants and other structures and expenditures for new and used machinery and equipment. The "costs" used in this calculation include costs charged to both the current and capital accounts. Both the shipments and costs figures include products bought and resold in the same condition.

For 1939 and earlier years, comparable data are not available for capital expenditures or for costs of capitalized supplies and equipment. However, a rough measure of value added in mining is computed for these years by subtracting from the value of shipments the cost of supplies, minerals received for preparation, fuels, purchased electric energy, and contract work.

Value added in mining differs from "national income originating in mining," as presented in the national income estimates compiled by the Office of Business Economics, Department of Commerce. The latter measure is the sum of factor costs incurred by an industry in production. It excludes, in addition to cost of materials, such costs as depreciation charges, State and local taxes (other than corporate income taxes), allowance for bad debts, and purchases of services from other economic sectors, such as contract services classified in other sectors, services of engineering and management consultants, advertising, telephone and telegraph expenses, insurance, royalties, etc. It is, therefore, a more "net" concept for value added in mineral production than that used in the minerals census. On the other hand, the OBE figures do not include a measure of value added in development of mineral properties.

27. Horsepower of Equipment

Beginning with 1870, statistics on the horsepower rating of power equipment have been collected in all minerals censuses, except in the abbreviated one for 1935.

As in previous censuses, separate figures were obtained on prime movers driving generators and those not driving generators. Separate figures are also published for electric motors driven by purchased energy and for those driven by energy generated. In accordance with the international convention, and as in previous censuses, aggregate horsepower was computed as the sum of the horsepower of all prime movers and the horsepower of electric motors driven by purchased energy.

In the 1954 Census, for all mineral industries except oil and gas, separate figures were obtained on "loading equipment," "transportation equipment," and "all other" equipment. It was specified that "loading equipment" should represent such equipment as power shovels, dragline excavators, and scrapers, including both underground and surface equipment. Examples of items to be included under "transportation equipment" were locomotives, tractors, trucks, and shaft hoists.

Some of the major items included under "all other," are drills, compressors, machine tools, pumps, and preparation plant machinery.

For the mineral industries, transportation equipment is particularly important in the total use of energy. Some of this equipment is of highway-type, and would be included also in the Interstate Commerce Commission figures on licensed vehicles operating on public highways. In order to measure the extent of overlap with ICC figures, separate data were requested on highway-type equipment.

No data were obtained on highway-type equipment used in the manufacturing industries, where a major portion of such equipment is probably used for delivery of products. For the mineral industries, such equipment is more frequently used for functions that cannot be segregated from mining and development of mineral properties. Table G shows that such equipment had over one-fourth of the total horsepower used in the mineral industries, and over one-third of total horsepower of all equipment used in the crude petroleum and natural gas extraction industries.

TABLE G.--HORSEPOWER OF POWER EQUIPMENT USED IN THE MINERAL INDUSTRIES, BY TYPE OF EQUIPMENT: 1954

Type of equipment	Horsepower of power equipment (1,000)	
	All mineral industries	Crude petroleum and natural gas extraction only
All equipment, total.....	40,711	20,101
Loading equipment.....	3,759	(1)
Transportation equipment, total.....	15,007	7,162
Highway type.....	11,360	7,162
Other.....	3,647	(1)
All other equipment.....	21,945	112,939

[1]For the crude petroleum and natural gas extraction industries only highway-type and all other equipment were segregated by type.

Respondents were requested to report the total horsepower rating of all equipment (except electric motors of less than one horsepower) in use or available for use at the end of 1954. They were to include emergency or stand-by equipment and equipment temporarily idle for repairs, excluding only junk. Companies were requested to include both stationary and mobile equipment. It was specified that all engines and turbines should be reported, such as steam and internal-combustion engines, hydroturbines, and water wheels. Moreover, both owned and rented equipment at the establishment was to be reported.

Separate data were not requested for 1954 on the horsepower of electric motors driven by purchased energy and of those drived by energy generated at the establishment. This segregation was made for 1954 on the basis of reported figures for the quantity of purchased electric energy used and the quantity generated and used. For establishments both purchasing and generating energy, the horsepower of electric motors was allocated in proportion to the energy used from each source.

28. Energy Used

The 1954 Census of Mineral Industries obtained data on the quantity and cost of fuels and electric energy used in mining which are comparable, in general, to such data obtained in the 1939, 1929, and 1919 censuses. Separate quantity and cost figures were provided on purchased coal, fuel oil, gas, and electric energy, and a cost figure was obtained for other fuels.

To supplement the data on energy and energy materials purchased, data were obtained on the quantity of such items produced and used at the same establishment. In the minerals census, such data were obtained on coal, crude petroleum, and natural gas used at the producing establishment for power and heat, and on electric energy generated and used at the same mining operation. For electric energy, the figures actually collected represented total quantity generated (excluding generating-station use) and quantity and value of electric energy generated and sold. The difference between these two quantity figures represented electric energy generated and used.

In order to provide total figures for energy used in specific industries, States, and types of operations, the energy figures were reduced to a common unit of measure representing kilowatt-hours, the international unit of energy. These figures include an estimated kilowatt-hour equivalent for "Other fuels" for which only "Cost" was reported. The conversion factors used in computing these kilowatt-hour equivalents were:

Bituminous coal.....	1 ton	= 7,677 kwh
Anthracite.....	1 ton	= 7,443 kwh
Distillate fuel oil.....	1 barrel	= 1,707 kwh
Residual fuel oil.....	1 barrel	= 1,842 kwh
Natural gas.....	1 MCF	= 307.7 kwh
Other fuels.....	$1	= 250 kwh

29. Water Use

The first census data on water use in the mineral industries were obtained for 1954. In order to facilitate reporting, only a very few items on water use were requested and the figures were collected in millions of gallons. Only total intake and source of water were required for establishments with total intake and total water pumped for drainage amounting to less than 10 million gallons. It appears that nearly complete coverage of water use in the mineral industries was obtained.

All respondents were required to report total water intake (except mine water) and to indicate the principal source of the fresh water: public systems (municipally or privately owned), company surface systems, and company ground systems. For areas other than oil and gas, data were also obtained on water discharged (except mine water), on mine water used, on mine water drained and discharged, and on the incidence of recirculation and the estimated total amount of water which would have been required if no water had been recirculated. This is shown as "Gross water use" in Table 13 of the industry reports.

For oil and gas field operations, separate data were obtained on fresh and brackish (salt) water intake and discharge, and separately on the amounts used for flooding.

30. Loading Equipment

For all industries, except crude petroleum and natural gas extraction, data were requested on the number and type of mechanical-power loading and excavating machines used. Such information had been obtained for all industries only once before, in the 1939 minerals census.

Operators were requested to show the number of machines in use or available for use at the end of 1954, classified by kind of power used and, for some types, by dipper or bucket capacity, by horsepower rating of scraper hoists, or by working height required. Operators were instructed to include emergency or stand-by equipment and equipment temporarily idle because in need of repairs, excluding only junk.

The inquiry was adapted in the various report forms to the types of equipment commonly used by each group of industries. For the coal mining industries, data were obtained also on the tonnage of coal loaded by each type of underground equipment.

31. Output Per Man-hour

Statistics on output per man-hour are shown for most of the mineral industries, exclusive of the crude petroleum and natural gas extraction industries, as Table 8 of the industry reports. For measuring output per man-hour, producing establishments were classified according to class intervals of output

per man-hour, with output usually measured in physical units, such as tons of coal, representing the principal product of the industry.

Where feasible, the distribution by output per man-hour was shown separately for major types of operation since it differs significantly for open-pits as compared with underground mines, and for a mine only, a mine and plant, and a plant only. The output per man-hour distributions are also sometimes shown by geographic divisions and States.

Meaningful ratios of output per man-hour could not be computed when a significant portion of the production resulted from the work of proprietors or contractors, for whom man-hour figures are excluded, or where a significant portion of the man-hours of production workers was spent in activity other than mineral production. Such operations were included as "unclassified."

32. Ratio of Wages and Salaries to Value Added in Mining

General statistics are shown in Table 9 of each industry report for establishments classified on the basis of the ratio of wages and salaries to value added in mining. In comparing labor costs with the other factors that contribute to value added it should be recognized, however, that value added as here computed includes many expenses for which no separate data were obtained in the 1954 minerals census, such as taxes, royalties, and interest paid; and nonpayroll benefits to employees.

33. Imputation of Data

Short forms were used to obtain information for about 1,700 small establishments in three areas; about 1,400 for crude petroleum and natural gas, 150 for uranium-radium-vanadium ores, and 165 for sand and gravel. In these forms less detail was obtained on selected items, such as cost of supplies, fuels, electric energy, horsepower of power equipment, and on the status of wells and drilling costs for oil and gas operations. Certain items were omitted entirely, such as water use.

To obtain industry totals, estimates were prepared for detail omitted for such establishments on the basis of other information reported on the short forms and the data reported on long forms for similar operations. The computed figures did not significantly effect the totals tabulated since in the case of crude petroleum and natural gas the establishments reported on short forms accounted for only about 0.5 percent of the total value of shipments of these industries; for sand and gravel, about 0.3 percent of value of shipments; and for uranium-radium-vanadium ores, for less than 10 percent of employment and principal expenses.

34. Confidentiality of Data for Individual Companies

The Bureau of the Census is prohibited by law from publishing any statistics that disclose information reported by individual companies. In the 1954 Census, preference was given to geographic regions and divisions over individual States in applying disclosure rules; similarly, States took precedence over counties. In tables showing industry detail, major industry group (2-digit) totals were given preference over industry group (3-digit) totals which, in turn, had precedence over individual (4-digit) industries.

Such order-of-precedence was used because (1) it was considered preferable to show regional data for an industry, even at the cost of withholding data for another (usually the least important) State in a region, rather than to show all publishable data for the individual States and group the disclosure States throughout the United States in an "all other" category as was frequently done in the 1939 and earlier censuses; and (2) by giving preference to industry group statistics over individual industries within each State, the extent to which individual States can be compared within the SIC industry classification framework is greatly increased.

In general, for each producing State not shown separately in Table 3 of the Industry Volume, a footnote gives the number of establishments. Only the number of establishments is shown in a footnote, in most cases, where the value of shipments and principal expenses for a State amounted to less than $100,000.

In the Area Volume, figures are not shown for a county or for an industry within a State if the publication of such statistics would disclose information for individual companies. In table 4 of that Volume, however, the number of establishments is shown for every county. Moreover, for all mining operations in each State, Table 5 shows the distribution by employment size of operations in each industry.

For industries with few establishments or considerable geographic concentration, it has frequently been necessary to use geographic regions broader than the traditional nine census divisions, in order to show all establishments by some geographic grouping. For this purpose the following combinations of Census divisions have been used:

NORTHEAST	SOUTH
New England	South Atlantic
Middle Atlantic	East South Central
	West South Central
NORTH CENTRAL	WEST
East North Central	Mountain
West North Central	Pacific

35. Abbreviations

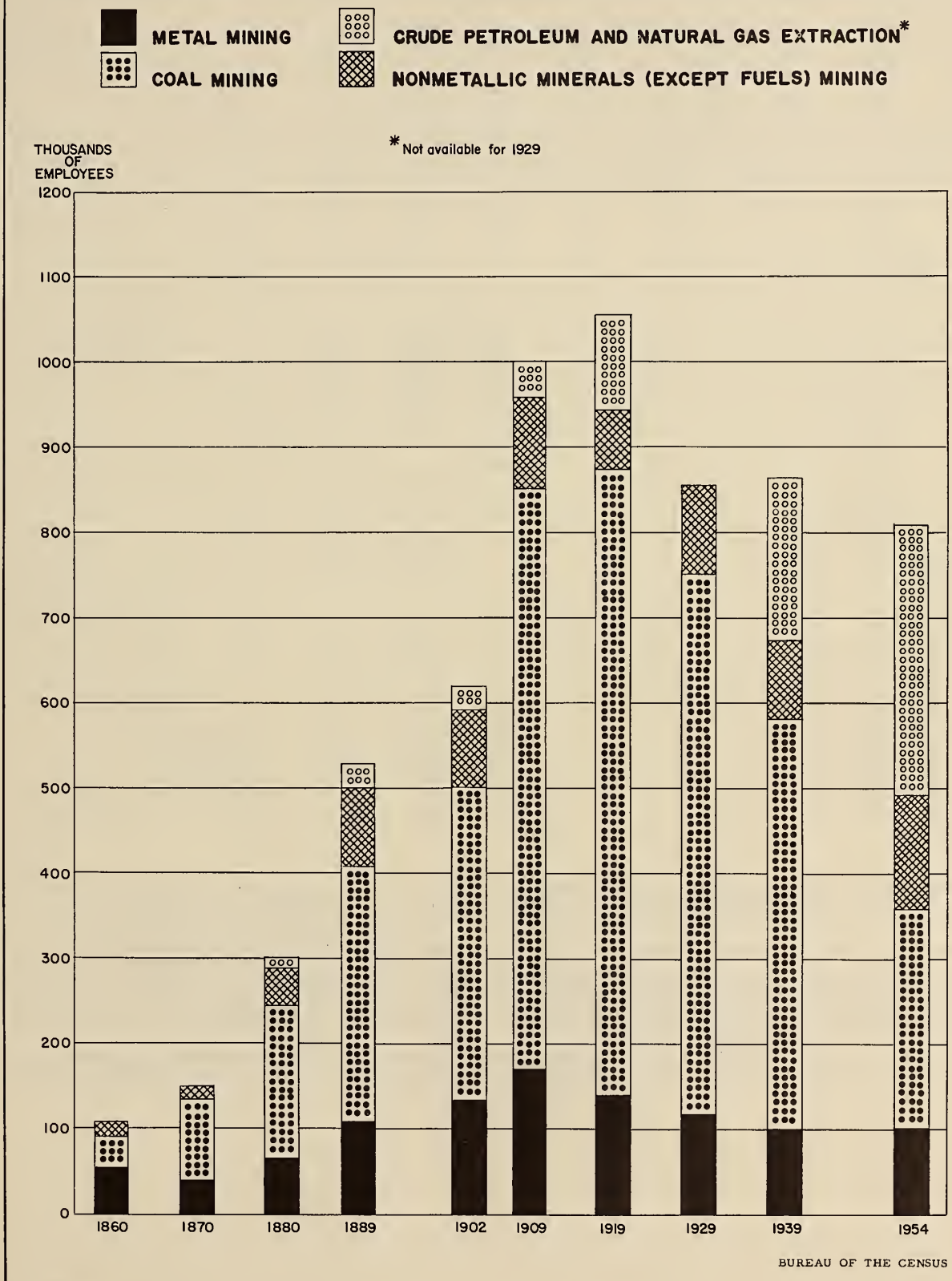
The following abbreviations and symbols occur frequently in tables and footnotes:

...	Zero
xxx	Not applicable
NA	Not available
n.e.c.	Not elsewhere classified
kwh	Kilowatt-hours
D	Withheld to avoid approximately disclosing figures for individual companies
S.I.C.	Standard Industrial Classification

Other abbreviations, such as lb., gal., and bbl., are used in the customary sense. Where the term "tons" only is used, it refers to short tons of 2,000 pounds; where the figures are expressed in tons of 2,240 pounds, the unit of measure is specified as "long tons."

GENERAL SUMMARY

MINING EMPLOYMENT IN THE UNITED STATES: 1860-1954



BUREAU OF THE CENSUS

Table 1.--COMPARATIVE STATISTICS FOR MINERAL OPERATIONS IN THE UNITED STATES: 1954, 1939, 1929, 1919, 1909, 1902, 1889, AND 1880

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes common clay and shale and contract service operations)

Item	Comparative statistics for all operations							Comparative statistics excluding the crude petroleum and natural gas extraction industries		
	1954	1939[1]	1919[2]	1909[2]	1902[3]	1889	1880	1954	1939	1929
Number of operating companies	32,932	20,658	(NA)	[4]23,664	[4]50,412	(NA)	(NA)	17,848	11,310	(NA)
Number of establishments	38,663	(NA)	21,997	25,017	(NA)	(NA)	(NA)	21,078	(NA)	10,996
Number of mines and quarries	20,736	13,557	14,417	27,240	20,352	21,807	7,395	20,736	13,557	12,506
Number of oil and gas wells producing at end of year	493,611	347,645	257,673	166,320	123,149	37,410	15,009	xxx	xxx	xxx
Number of preparation plants	8,814	5,450	1,503	(NA)	(NA)	(NA)	(NA)	8,232	4,716	(NA)
Value of shipments[5]....$1,000	15,147,297	3,413,954	3,158,464	1,238,410	772,558	426,311	251,967	5,805,758	1,754,123	2,392,831
Value added in mining....do	11,740,054	2,765,396	2,387,956	976,928	556,964	334,040	216,790	4,066,360	1,429,122	1,955,804
Number of persons engaged, total	846,144	872,429	1,084,796	1,060,938	621,846	542,584	295,991	510,584	678,549	870,448
Production and development workers	666,621	774,130	987,184	980,772	[6]581,985	542,584	295,991	431,138	625,134	812,220
All other employees	139,347	82,259	75,457	46,475	39,861			59,095	45,105	53,331
Proprietors and firm members	40,176	16,040	22,155	33,691	(NA)	(NA)	(NA)	20,352	8,310	4,897
Performing manual labor	20,958	7,068	5,272	9,937	(NA)			13,959	5,213	(NA)
Man-hours worked by production and development workers....1,000	1,288,461	1,287,852	(NA)	(NA)	(NA)	(NA)	(NA)	796,743	1,022,824	(NA)
Principal expenses designated below, total....$1,000	8,385,623	1,823,329	2,226,189	947,610	632,389	319,399	129,949	3,892,224	1,181,390	1,675,945
Wages of production and development workers....do	2,639,378	970,546	1,304,409	599,706	376,218	227,129	94,772	1,662,783	750,111	1,099,895
Salaries of all other employees....do	817,601	204,225	151,272	55,878	40,577		(NA)	331,753	106,278	139,023
Minerals received for preparation....do	710,321	(NA)	35,905	29,318	(NA)			537,406	(NA)	(NA)
Supplies....do	2,023,377	307,980	528,854	184,289		85,551	31,447	855,022	220,789	298,198
Fuel[7]....do	206,491	60,965	94,849	46,503	192,262			109,681	34,718	49,146
Purchased electric energy....do	161,083	69,245	28,661					126,066	62,144	71,769
Contract work....do	1,827,372	210,368	82,239	30,690	23,332	6,720	3,730	269,513	7,350	17,914
Purchased machinery installed....do	1,214,881		(NA)					351,676		86,733
Capital expenditures, total....do	2,725,665	(NA)	(NA)					499,349	(NA)	(NA)
Development and exploration of mineral property....do	1,309,076		334,015	(NA)	(NA)	(NA)	(NA)	79,137		89,646
Preparation plant construction....do	192,664	27,435						136,870	16,217	
Other construction....do	121,241		(NA)					18,213		(NA)
New machinery and equipment....do	992,399	241,135						224,649	52,666	
Used plant and equipment....do	110,285	21,962						40,499	9,451	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	40,879	14,160	6,786	4,700	[2]2,753			20,778	9,059	7,584
Per production worker	61	18	7	5	5			48	14	9
Prime movers....1,000	30,620	8,149	5,147	4,484	[2]2,727			11,816	3,512	2,780
Electric motors driven by purchased energy....do	10,259	6,011	1,639	216	[3]26			8,962	5,547	4,804
Horsepower rating of electric motors driven by energy generated at establishment....do	1,582	1,638	1,260	508	[3]113	(NA)	(NA)	1,182	1,520	1,357
Energy used....million kwh equivalent	373,126	224,898	(NA)					88,030	77,131	133,790
Coal[8]....1,000 short tons	2,842	7,186	26,081					2,835	7,160	14,675
Fuel oils[8]....1,000 barrels	16,269	6,115	9,747	(NA)	(NA)			11,674	3,770	4,047
Gas[8]....million cu.ft	931,705	489,052	103,432					89,280	26,720	25,536
Electric energy purchased....million kwh	13,250	6,329	(NA)					10,502	5,677	5,382
Electric energy generated and used....do	3,604	2,070	(NA)					2,290	1,884	2,081

NA Not available.
xxx Not applicable.

[1]Except for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing stone at such operations was $7,913,000; this value has been included in the value of shipments and value added in mining.

[2]Excludes data for sand and gravel operations. There were 1,563 such mines in 1939 with products valued at $79,402,000.

[3]Includes data for lime plants producing lime valued at $9,336,000.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[6]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[7]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[8]Includes data for fuels produced and used at the same establishment for power or heat.

Table 2.--SELECTED STATISTICS FOR THE MINERAL INDUSTRIES

(For explanation of column

Code	Industry group and industry	Number of operating companies	Number of establishments	Number of mines, quarries, and wells	Number of preparation plants	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of persons engaged: Total	Production and development workers	All other employees	Proprietors and firm members: Total	Proprietors and firm members: Performing manual labor	Man-hours worked by production and development workers (1,000)
	All mineral industries	31,994	37,446	513,128	8,610	14,906,583	11,546,418	825,716	647,141	138,567	40,008	20,838	1,248,898
	MAJOR INDUSTRY GROUPS												
10	Metal mining	2,961	3,496	3,356	993	[3]1,506,238	[3]1,075,519	103,775	81,896	18,354	3,525	2,721	168,346
11	Anthracite mining	1,296	1,436	1,263	196	408,431	196,835	39,800	33,026	4,436	2,338	2,065	48,266
12	Bituminous coal and lignite mining	6,104	6,855	6,844	628	2,068,183	1,418,384	226,593	199,655	19,178	7,760	5,485	325,769
13	Crude petroleum and natural gas extraction	15,099	17,585	493,611	582	9,341,539	[4]7,673,694	335,559	235,483	80,252	19,824	6,999	491,718
14	Nonmetallic minerals (except fuels) mining	6,623	8,074	8,054	6,211	1,582,192	1,181,986	119,989	97,081	16,347	6,561	3,568	214,799
	INDUSTRIES												
10	Metal mining	2,961	3,496	3,356	993	[3]1,506,238	[3]1,075,519	103,775	81,896	18,354	3,525	2,721	168,346
1011	Iron ores	94	225	298	123	547,218	435,668	34,243	28,216	5,954	73	46	53,288
1021	Copper ores	179	210	201	48	508,729	334,876	27,997	21,544	6,269	184	145	46,676
103	Lead and zinc ores	411	520	491	141	175,947	107,409	17,016	13,592	2,974	450	343	27,554
1032	Lead ores	112	113	110	18	4,581	3,415	702	475	103	124	102	903
1033	Zinc ores	16	28	23	15	11,661	7,733	1,934	1,308	614	12	7	2,383
1034	Lead-zinc ores	293	379	358	108	159,705	96,261	14,380	11,809	2,257	314	234	24,268
104	Gold and silver ores	514	535	528	275	46,581	35,354	5,370	4,200	631	539	434	9,363
1042	Lode gold	286	298	291	135	28,517	21,884	3,300	2,634	386	280	223	5,894
1043	Placer gold	131	136	136	116	5,916	3,614	729	501	55	173	145	1,255
1044	Silver ores	98	101	101	24	12,148	9,856	1,341	1,065	190	86	66	2,214
1051	Bauxite	12	25	20	9	16,819	12,827	854	661	191	2	...	1,288
106	Ferro-alloy ores, except vanadium	972	1,086	1,042	297	153,671	107,399	9,493	6,838	1,240	1,415	1,214	15,122
1062	Manganese ores	319	367	360	63	32,398	18,118	3,062	2,266	338	458	386	4,293
1064	Tungsten ores	500	549	524	171	60,737	40,744	3,701	2,635	352	714	634	6,327
1063 1069	Molybdenum ores Ferro-alloy ores, n.e.c	155	170	158	63	60,536	48,537	2,730	1,937	550	243	194	4,502
1081	Metal mining contract services	114	114	xxx	xxx	38,679	26,703	3,141	2,863	196	82	55	6,519
109	Miscellaneous metal ores	701	781	776	100	[3]18,594	[3]15,283	5,661	3,982	899	780	484	8,536
1092	Mercury ores	81	87	87	75	4,519	3,355	578	372	81	125	110	841
1093	Titanium ores	7	10	8	8	12,750	11,134	844	568	275	1	1	1,261
1094	Uranium-radium-vanadium ores	572	637	636	8	(NA)	(NA)	4,081	2,944	523	614	339	6,227
1099	Metallic ores, n.e.c	44	47	45	9	1,325	794	158	98	20	40	34	207
11	Anthracite mining	1,296	1,436	1,263	196	408,431	196,835	39,800	33,026	4,436	2,338	2,065	48,266
1111	Anthracite	1,160	1,291	1,263	196	365,536	167,090	34,970	28,823	3,946	2,201	1,985	42,061
1112	Anthracite stripping contract services	131	132	xxx	xxx	42,048	29,079	4,682	4,074	482	126	72	6,038
1113	Anthracite contract services, except stripping	13	13	xxx	xxx	847	666	148	129	8	11	8	167
12	Bituminous coal and lignite mining	6,104	6,855	6,844	628	2,068,183	1,418,384	226,593	199,655	19,178	7,760	5,485	325,769
1211	Bituminous coal	5,913	6,643	6,784	628	2,040,200	1,396,774	224,352	197,819	18,994	7,539	5,324	322,410
1212	Lignite	56	60	60	...	10,387	9,093	631	505	69	57	43	901
1213	Bituminous coal and lignite contract services	152	152	xxx	xxx	17,596	12,517	1,610	1,331	115	164	118	2,458
13	Crude petroleum and natural gas extraction	15,099	17,585	493,611	582	9,341,539	[4]7,673,694	335,559	235,483	80,252	19,824	6,999	491,718
131 (part)	Crude petroleum and natural gas	9,720	11,508	485,907	xxx	7,070,097	6,129,213	185,822	109,792	62,714	13,316	3,886	216,581
1312	Crude petroleum	8,565	10,101	432,226	xxx	6,642,452	5,741,256	173,032	101,542	59,740	11,750	3,517	201,086
1313	Natural gas	1,290	1,407	53,681	xxx	427,645	387,957	12,790	8,250	2,974	1,566	369	15,495
131 (part)	Natural gas liquids	181	562	xxx	582	640,422	(4)	17,412	13,560	3,780	72	13	27,862
1314	Natural gasoline	167	521	xxx	540	507,655	(4)	15,114	11,740	3,305	69	13	24,119
1315	Cycle condensate	30	41	xxx	42	132,767	(4)	2,298	1,820	475	3	...	3,743
133	Oil and gas field contract services	5,463	5,515	7,704	xxx	1,631,020	1,118,544	132,325	112,131	13,758	6,436	3,100	247,275
1331	Drilling oil and gas wells	2,846	2,869	7,372	xxx	972,745	623,967	71,375	62,145	5,831	3,399	1,684	133,216
1332	Building, repairing, and dismantling rigs and derricks	120	120	...	xxx	11,657	9,552	1,763	1,539	93	131	68	1,720
1339	Oil and gas field contract services, n.e.c	2,502	2,526	332	xxx	646,618	485,025	59,187	48,447	7,834	2,906	1,348	112,339
14	Nonmetallic minerals (except fuels) mining		8,074	8,054	6,211	1,582,192	1,181,986	119,989	97,081	16,347	6,561	3,568	214,799
141	Dimension stone	322	351	352	...	18,945	15,155	3,523	3,068	156	299	133	5,893
1412	Dimension limestone	63	65	65	...	3,754	2,942	572	472	28	72	41	872
1413	Dimension granite	79	86	86	...	5,738	4,590	1,022	917	50	55	25	1,769
1415	Dimension marble	18	30	31	...	3,491	2,893	645	612	25	8	3	1,245
1417	Dimension sandstone	107	115	115	...	5,292	4,178	1,070	925	48	97	43	1,752
1416 1419	Dimension trap rock Dimension stone, n.e.c	55	55	55	...	670	552	214	142	5	67	21	255
142	Crushed and broken stone		1,901	1,882	1,761	465,254	337,611	38,665	33,124	4,280	1,261	595	75,559
1422	Crushed and broken limestone	1,174	1,447	1,443	1,362	328,757	239,604	29,257	24,925	3,315	1,017	490	56,335
1423	Crushed and broken granite	75	101	99	88	30,875	22,201	2,605	2,344	206	55	24	5,607
1424	Crushed and broken slate	6	11	11	11	8,162	5,055	535	464	69	2	...	1,198
1425	Crushed and broken marble	14	18	17	16	5,142	3,661	433	379	52	2	2	796
1426	Crushed and broken trap rock	100	142	139	131	45,471	34,127	3,132	2,680	377	75	29	6,659
1427	Crushed and broken sandstone	60	87	86	74	31,190	22,913	1,757	1,529	182	46	23	3,283
1429	Crushed and broken stone, n.e.c	83	95	87	79	15,657	10,050	946	803	79	64	27	1,681
144	Sand and gravel	3,340	3,931	3,949	3,309	466,015	356,729	39,989	30,533	5,933	3,523	1,913	70,103
	Common sand and gravel	3,196	3,756	3,766	3,156	435,662	334,046	37,498	28,423	5,667	3,408	1,852	65,600
	Glass sand	40	44	44	38	18,591	13,701	1,321	1,144	151	26	11	2,505
	Foundry sand	105	131	139	115	11,762	8,982	1,170	966	115	89	50	1,998

See footnotes at end of table.

IN THE UNITED STATES, BY INDUSTRY GROUP AND INDUSTRY: 1954

captions, see INTRODUCTION)

Principal expenses designated below ($1,000)								Purchased machinery installed	Capital expenditures ($1,000)					Horsepower rating of power equipment		Water intake[2]	Code
Total	Wages and salaries: Production and development workers	Wages and salaries: All other employees	Minerals received for preparation	Supplies[1]	Purchased fuel	Purchased electric energy	Contract work	($1,000)	Total	Development and exploration of mineral property	Preparation plant and other construction	New machinery and equipment	Used plant and equipment	Aggregate horsepower (1,000)	Horsepower per production worker	(million gallons)	
8,267,152	2,572,297	813,425	708,809	1,980,576	205,688	159,619	1,826,738	1,213,108	2,723,756	1,308,967	313,598	991,186	110,005	40,711	63	721,982	
1,038,537	353,303	109,722	[3]168,922	229,913	26,936	32,662	117,079	86,891	221,067	64,569	84,313	65,655	6,530	5,113	62	137,781	10
348,749	113,932	21,997	119,848	29,027	3,932	8,787	51,226	9,270	10,494	1,438	2,241	4,767	2,048	1,506	46	27,214	11
1,521,275	764,863	109,442	203,953	322,916	17,111	47,802	55,188	121,640	118,811	3,601	34,168	66,206	14,836	6,332	32	29,408	12
[4]4,493,399	976,595	485,848	[4]172,921	1,168,349	96,810	35,017	1,557,859	863,205	2,226,316	1,229,958	158,822	767,750	69,786	20,101	85	158,487	13
865,192	363,604	86,416	43,165	230,371	60,899	35,351	45,386	132,102	147,068	9,401	34,054	86,808	16,805	7,659	79	369,092	14
1,038,537	353,303	109,722	[3]168,922	229,913	26,936	32,662	117,079	86,891	221,067	64,569	84,313	65,655	6,530	5,113	62	137,781	10
316,443	119,688	37,221	12,837	75,866	9,549	13,767	47,515	36,994	84,978	23,515	32,790	27,955	718	1,795	64	26,855	1011
368,307	98,491	37,574	100,693	72,822	8,576	6,278	43,873	23,821	82,210	23,750	35,265	21,955	1,240	1,545	72	59,112	1021
145,479	53,676	17,687	35,116	24,673	1,409	6,838	6,080	5,942	11,520	6,509	2,054	2,509	448	749	55	22,149	103
3,498	1,726	489	1	628	55	267	332	458	575	336	123	83	33	29	61	247	1032
13,385	4,406	3,877	1,203	1,855	274	438	1,332	1,165	2,339	932	762	614	31	64	49	1,492	1033
128,596	47,544	13,321	33,912	22,190	1,080	6,133	4,416	4,319	8,606	5,241	1,169	1,812	384	656	56	20,410	1034
33,934	17,406	3,212	1,279	8,738	922	1,652	725	1,658	3,747	1,804	780	711	452	212	50	17,320	104
20,169	10,406	1,863	1,274	5,017	569	720	320	910	2,177	1,037	564	386	190	112	42	4,277	1042
4,815	1,997	314	xxx	1,554	248	661	41	302	504	180	52	121	151	64	128	10,752	1043
8,950	5,003	1,035	5	2,167	105	271	364	446	1,066	587	164	204	111	36	34	2,291	1044
7,527	2,529	1,052	1,181	789	239	134	1,603	356	310	24	11	271	4	49	74	179	1051
91,851	31,330	7,205	16,734	23,235	2,011	2,519	8,817	8,475	15,519	3,185	5,309	5,577	1,448	368	54	7,661	106
24,532	7,643	1,649	5,382	5,087	721	477	3,573	2,304	3,264	607	708	1,366	583	106	47	2,834	1062
37,515	13,148	1,610	10,891	8,295	933	753	1,885	3,562	6,326	2,168	1,267	2,224	667	156	59	3,380	1064
29,804	10,539	3,946	461	9,853	357	1,289	3,359	2,609	5,929	410	3,334	1,987	198	107	55	1,447	{1063 1069
27,595	13,933	1,335	xxx	10,412	1,273	133	509	2,049	2,400	xxx	523	1,522	355	152	53	99	1081
47,401	16,250	4,436	[3]1,082	13,378	2,957	1,341	7,957	7,596	20,383	5,782	7,581	5,155	1,865	242	61	4,406	109
3,425	1,607	365	([5])	[5]1,160	204	61	28	226	515	167	176	116	56	12	31	12	1092
8,027	2,397	1,302	([5])	[5]2,801	449	743	335	1,286	3,998	...	2,904	1,092	2	46	81	2,793	1093
34,642	11,908	2,660	(NA)	9,844	2,263	505	7,462	5,336	14,793	5,494	4,289	3,842	1,168	165	56	1,601	1094
1,307	338	109	([5])	[5]655	41	32	132	748	1,077	121	212	105	639	19	([6])	...	1099
348,749	113,932	21,997	119,848	29,027	3,932	8,787	51,226	9,270	10,494	1,438	2,241	4,767	2,048	1,506	46	27,214	11
318,733	98,678	19,392	119,848	20,224	2,038	8,397	50,156	5,667	7,884	1,438	2,148	3,367	931	1,072	37	27,206	1111
29,357	14,809	2,571	xxx	8,651	1,868	390	1,068	3,529	2,537	xxx	93	1,371	1,073	433	106	8	1112
659	445	34	xxx	152	26	...	2	74	73	xxx	...	29	44	1	11	...	1113
1,521,275	764,863	109,442	203,953	322,916	17,111	47,802	55,188	121,640	118,811	3,601	34,168	66,206	14,836	6,332	32	29,408	12
1,506,355	757,175	108,474	203,953	319,298	15,712	47,512	54,231	118,481	115,761	3,586	33,948	63,845	14,382	6,093	31	29,325	1211
3,914	2,177	411	...	627	239	254	206	607	639	15	134	479	11	75	148	16	1212
11,006	5,511	557	xxx	2,991	1,160	36	751	2,552	2,411	xxx	86	1,882	443	164	123	67	1213
[4]4,493,399	976,595	485,848	[4]172,921	1,168,349	96,810	35,017	1,557,859	863,205	2,226,316	1,229,958	158,822	767,750	69,786	20,101	85	158,487	13
3,054,030	459,955	375,785	xxx	692,682	36,177	30,624	1,458,807	621,048	1,898,454	1,206,214	98,229	558,950	35,061	9,123	83	82,408	131
2,874,614	430,497	360,449	xxx	646,428	34,641	30,104	1,372,495	588,211	1,770,683	1,129,878	86,856	526,029	27,920	8,636	85	81,984	1312
179,416	29,458	15,336	xxx	46,254	1,536	520	86,312	32,837	127,771	76,336	11,373	32,921	7,141	487	59	424	1313
[4]228,384	63,983	21,074	[7]57,556	43,891	1,964	3,190	36,726	65,752	109,959	xxx	55,794	51,227	2,938	2,902	214	67,262	131
[4]208,006	55,114	18,245	[7]57,556	37,534	1,929	2,996	34,632	60,913	102,277	xxx	53,188	46,160	2,929	2,536	216	52,614	1314
20,378	8,869	2,829	([4])	6,357	35	194	2,094	4,839	7,682	xxx	2,606	5,067	9	366	201	14,648	1315
1,095,620	452,657	88,989	xxx	431,776	58,669	1,203	62,326	176,405	217,903	23,744	4,799	157,573	31,787	8,076	72	8,817	133
686,173	264,797	39,515	xxx	298,789	36,704	320	46,048	120,385	153,468	23,416	1,939	99,722	28,391	4,265	69	8,313	1331
7,416	4,769	452	xxx	1,689	308	3	195	347	437	...	56	308	73	39	25	21	1332
402,031	183,091	49,022	xxx	131,298	21,657	880	16,083	55,673	63,998	328	2,804	57,543	3,323	3,772	78	483	1339
865,192	363,604	86,416	43,165	230,371	60,899	35,351	45,386	132,102	147,068	9,401	34,054	86,808	16,805	7,659	79	369,092	14
12,471	7,938	687	...	2,482	401	389	574	891	947	69	86	581	211	94	31	133	141
2,335	1,429	127	...	586	87	54	52	158	125	...	...	89	36	18	37	16	1412
3,806	2,404	235	...	693	96	229	149	226	245	30	5	157	53	30	33	95	1413
2,244	1,505	135	...	511	13	80	...	55	61	5	14	39	3	13	21	16	1415
3,629	2,273	183	...	631	161	22	359	413	472	23	64	285	100	27	30	6	1417
457	327	7	...	61	44	4	14	39	44	11	3	11	19	6	43	...	{1416 1419
273,081	122,499	22,697	2,432	86,884	16,050	11,828	10,685	44,701	44,943	1,376	11,894	26,316	5,357	2,779	84	59,919	142
196,322	90,715	17,103	1,895	58,726	11,913	8,634	7,336	32,622	31,973	1,219	7,638	19,153	3,963	2,183	88	53,610	1422
17,699	7,573	1,306	([5])	[5]6,506	747	838	729	3,041	3,187	13	844	1,841	489	169	72	3,215	1423
5,484	1,949	420	...	2,045	610	336	124	304	312	...	35	277	...	26	56	119	1424
3,008	1,120	249	([5])	[5]1,268	86	117	168	196	354	10	154	186	4	13	34	11	1425
25,349	12,089	2,116	([5])	[5]7,600	1,409	1,148	987	3,870	3,670	50	1,196	1,915	509	216	81	1,101	1426
15,859	5,970	1,084	...	6,636	890	542	737	4,096	4,624	6	1,772	2,701	145	108	71	1,420	1427
9,360	3,083	419	...	4,646	395	213	604	572	823	78	255	243	247	63	79	443	1429
254,992	118,966	28,347	(NA)	61,617	21,373	9,997	14,692	47,694	46,087	1,649	7,866	28,558	8,014	3,210	105	186,576	144
238,513	111,600	26,958	(NA)	57,481	19,758	8,797	13,919	45,825	44,164	1,573	7,420	27,254	7,917	3,069	108	179,035	
10,119	4,279	819	(NA)	3,208	840	807	166	965	1,096	34	258	789	15	54	48	5,828	
6,360	3,087	570	(NA)	928	775	393	607	904	827	42	188	515	82	87	90	1,713	

Table 2.—SELECTED STATISTICS FOR THE MINERAL INDUSTRIES

(For explanation of column

Code	Industry group and industry	Number of operating companies	Number of establishments	Number of mines, quarries, and wells	Number of preparation plants	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of persons engaged: Total	Production and development workers	All other employees	Proprietors and firm members: Total	Proprietors and firm members: Performing manual labor	Man-hours worked by production and development workers (1,000)
	INDUSTRIES—Continued												
14	Nonmetallic minerals (except fuels) mining—Con.												
145	Clay, ceramic, and refractory minerals	475	632	673	247	103,768	78,449	8,633	7,463	769	401	213	15,377
1452	Bentonite	29	43	43	28	21,830	16,350	657	578	56	23	7	1,340
1453	Fire clay	180	248	252	61	22,206	17,468	2,154	1,802	185	167	74	3,123
1454	Fuller's earth	15	16	19	13	6,012	4,179	572	510	54	8	4	1,109
1455	Kaolin and ball clay	40	54	61	38	31,892	25,249	3,167	2,820	328	19	7	6,159
1456	Feldspar	58	84	110	22	6,669	4,048	700	579	37	84	70	1,235
1457	Magnesite and brucite	4	4	4	1	1,655	1,372	133	121	11	1	1	237
1459	Clay, ceramic, and refractory minerals, n.e.c.	169	183	184	84	13,504	9,783	1,250	1,053	98	99	50	2,174
146	Natural abrasives, except sand	32	32	32	24	4,474	3,681	310	251	34	25	12	524
1462	Abrasive stones, natural	11	11	11	6	326	236	50	42	...	8	3	78
1469	Natural abrasives, n.e.c.	21	21	21	18	4,148	3,445	260	209	34	17	9	446
147	Chemical and fertilizer mineral mining	243	317	298	185	457,586	340,520	21,821	17,295	4,314	212	129	36,418
1472	Barite	36	44	45	35	18,269	14,051	1,160	1,036	89	35	18	2,403
1473	Fluorspar	94	104	105	33	15,461	9,914	1,374	997	263	114	82	2,001
1474	Potash, soda, and borate minerals	15	20	20	16	107,757	82,213	6,323	4,738	1,584	1	...	9,381
1475	Phosphate rock	53	75	73	54	117,976	62,089	5,484	4,579	861	44	21	10,119
1476	Rock salt	11	15	15	13	35,658	30,013	1,928	1,659	266	3	1	3,861
1477	Sulfur	12	20	16	5	140,685	124,166	4,095	3,077	1,018	...	...	6,229
1479	Chemical and fertilizer mineral mining, n.e.c.	36	39	24	29	21,780	18,074	1,457	1,209	233	15	7	2,424
1481	Nonmetallic minerals (except fuels) contract services	62	62	xxx	xxx	6,571	4,884	706	614	25	67	26	1,258
149	Miscellaneous nonmetallic minerals (except fuels)	757	848	868	685	59,579	44,957	6,342	4,733	836	773	547	9,667
1492	Gypsum	34	37	34	22	6,631	5,352	470	399	50	21	7	926
1493	Mica	446	498	510	444	4,126	3,284	1,259	668	42	549	432	1,196
1494	Native asphalt and bitumens	9	12	12	8	6,424	4,857	563	451	100	12	3	987
1495	Pumice and pumicite	73	75	75	47	3,393	2,741	326	223	44	59	35	440
1496	Talc, soapstone, and pyrophyllite	54	68	75	39	11,819	9,486	1,501	1,297	174	30	14	2,778
1498	Peat	86	88	87	68	2,326	1,800	422	321	32	69	42	637
1497	Vermiculite	} 63	70	75	57	24,860	17,437	1,801	1,374	394	33	14	2,703
1499	Miscellaneous nonmetallic minerals, n.e.c.												

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
xxx Not applicable.
[1]Includes products purchased for resale without further processing.
[2]Includes mine water used.
[3]Excludes figures for the Uranium-radium-vanadium ores industry.
[4]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added is shown for these industries.
[5]Figures for minerals received for preparation are included with those for supplies.
[6]Not shown since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers.
[7]Represents only natural gas liquids transferred for further processing.

IN THE UNITED STATES, BY INDUSTRY GROUP AND INDUSTRY: 1954—Continued

captions, see INTRODUCTION)

Principal expenses designated below ($1,000)								Purchased machinery installed ($1,000)	Capital expenditures ($1,000)					Horsepower rating of power equipment		Water intake[2] (million gallons)	Code
Total	Wages and salaries		Minerals received for preparation	Supplies[1]	Purchased fuel	Purchased electric energy	Contract work		Total	Development and exploration of mineral property	Preparation plant and other construction	New machinery and equipment	Used plant and equipment	Aggregate horsepower (1,000)	Horsepower per production worker		
	Production and development workers	All other employees															
54,377	22,490	4,014	1,305	12,847	4,651	2,415	6,655	6,508	9,062	287	2,591	5,709	475	361	48	6,753	145
7,653	1,920	215	(5)	[5]2,916	468	305	1,829	604	642	15	81	392	154	36	63	12	1452
11,371	5,670	928	160	1,983	639	305	1,686	1,292	1,327	79	184	925	139	100	56	157	1453
3,563	1,381	363	...	840	538	218	223	539	525	...	84	413	28	23	46	51	1454
18,276	8,115	1,828	14	4,576	1,524	857	1,362	2,601	4,291	109	1,449	2,733	...	97	34	3,890	1455
4,457	1,523	199	430	1,400	238	302	365	294	408	36	94	259	19	29	52	1,224	1456
822	469	70	...	212	32	39	...	17	17	...	...	17	...	13	115	1,152	1457
8,235	3,412	411	(5)	[5]1,621	1,212	389	1,190	1,161	1,852	48	699	970	135	60	57	267	1459
2,229	932	229	32	580	192	76	188	123	398	11	263	103	21	14	57	203	146
222	132	...	(5)	[5]31	10	...	49	(D)	(D)	...	...	(D)	(D)	1	25	(D)	1462
2,007	800	229	(5)	[5]581	182	76	139	(D)	(D)	11	263	(D)	(D)	13	64	(D)	1469
228,044	73,324	26,067	38,838	55,156	15,921	9,018	9,720	26,054	37,641	5,152	9,661	22,499	329	928	54	113,421	147
7,854	3,451	423	...	2,251	327	552	850	1,250	1,012	24	78	853	57	68	65	6,047	1472
10,601	3,451	1,415	1,728	2,195	495	513	804	561	749	140	145	429	35	49	49	1,091	1473
59,649	23,028	10,411	(5)	[5]17,329	5,594	1,641	1,646	8,390	9,056	525	1,599	6,866	66	195	41	10,561	1474
80,598	17,089	4,440	35,393	11,917	3,348	5,507	2,904	8,156	11,338	1,083	2,484	7,662	109	357	78	62,618	1475
14,868	7,117	1,454	...	5,351	335	367	244	1,534	2,186	53	873	1,259	1	47	29	2,968	1476
43,747	14,619	6,567	...	14,055	5,629	44	2,833	2,803	8,845	3,069	3,110	2,635	31	159	52	15,969	1477
10,727	4,569	1,357	(5)	[5]3,775	193	394	439	3,360	4,455	258	1,372	2,795	30	52	44	14,167	1479
3,993	2,214	113	xxx	1,088	354	11	213	402	381	xxx	19	306	56	38	63	25	1481
36,005	15,241	4,262	558	9,711	1,957	1,617	2,659	5,729	7,609	857	1,674	2,736	2,342	238	50	2,062	149
3,159	1,567	285	(5)	[5]924	171	140	72	2,395	2,423	13	48	402	1,960	29	71	131	1492
2,570	1,255	87	34	564	151	132	347	474	860	255	188	321	96	17	(6)	1,022	1493
3,790	1,443	704	...	1,251	137	85	170	476	552	114	24	402	12	32	69	38	1494
1,731	748	214	(5)	[5]334	119	40	276	298	415	32	98	99	186	26	115	27	1495
7,984	4,141	799	256	1,671	238	467	412	486	1,197	300	453	407	37	36	28	324	1496
1,512	829	111	...	321	174	31	46	159	205	34	43	104	24	24	74	...	1498
15,259	5,258	2,062	265	4,649	967	722	1,336	1,441	1,957	109	820	1,001	27	76	55	520	1497 1499

Table 3.—SELECTED STATISTICS FOR THE MINERAL INDUSTRIES,

(For explanation of column

	Geographic division and State	Number of operating companies	Number of establishments	Number of mines, quarries, and wells	Number of preparation plants	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of persons engaged					Man-hours worked by production and development workers (1,000)
								Total	Production and development workers	All other employees	Proprietors and firm members		
											Total	Performing manual labor	
1	United States, total	31,994	37,446	513,128	8,610	14,906,583	11,546,418	825,716	647,141	138,567	40,008	20,838	1,248,898
2	New England	340	385	386	273	41,325	32,104	4,286	3,456	613	217	122	7,581
3	Maine	62	66	65	30	2,175	1,809	356	292	22	42	29	614
4	New Hampshire	34	39	39	28	1,980	1,658	292	240	26	26	15	481
5	Vermont	36	42	42	27	14,427	10,600	1,352	1,187	142	23	17	2,633
6	Massachusetts	111	127	128	103	11,577	8,925	1,275	992	215	68	26	2,142
7	Rhode Island	20	20	20	14	1,447	1,109	173	140	23	10	10	274
8	Connecticut	83	91	92	71	9,719	8,003	838	605	185	48	25	1,437
9	Middle Atlantic	4,740	5,320	87,123	961	1,229,313	767,158	127,629	105,017	15,778	6,834	4,188	177,172
10	New York	567	629	17,222	248	128,393	96,838	12,298	7,641	3,876	781	283	16,907
11	New Jersey	117	153	149	122	[3]50,855	[3]38,617	4,186	3,479	647	60	33	7,820
12	Pennsylvania	4,076	4,538	69,752	591	1,050,065	[4]631,703	111,145	93,897	11,255	5,993	3,872	152,445
13	East North Central	4,115	4,636	49,974	1,526	1,094,500	813,435	86,356	69,142	12,269	4,945	2,336	131,846
14	Ohio	1,531	1,654	14,570	411	228,046	[4]166,825	23,575	17,508	4,146	1,921	942	33,242
15	Indiana	713	776	4,235	274	129,720	85,201	9,889	7,782	1,402	705	339	14,304
16	Illinois	1,233	1,345	26,384	397	492,465	[4]375,191	31,639	26,627	3,530	1,482	624	48,697
17	Michigan	505	567	4,499	209	194,668	[4]149,074	16,980	13,729	2,702	549	264	28,238
18	Wisconsin	270	294	286	235	49,601	37,144	4,273	3,496	489	288	167	7,365
19	West North Central	2,976	3,320	40,890	1,181	1,006,491	785,763	54,910	43,170	8,397	3,343	1,523	86,965
20	Minnesota	192	292	355	216	343,864	290,205	17,191	13,849	3,146	196	83	26,355
21	Iowa	279	329	259	228	31,564	21,513	2,984	2,347	297	340	202	5,288
22	Missouri	419	456	529	280	[3]78,171	[3]56,554	8,377	6,697	1,268	412	244	13,461
23	North Dakota	137	146	556	29	[3]28,694	[3] 47,151	1,864	1,399	399	66	29	2,956
24	South Dakota	175	187	177	95	[3]31,314	[3]22,419	3,051	2,497	373	181	129	5,651
25	Nebraska	228	249	721	139	36,817	29,222	1,849	1,433	203	213	113	3,253
26	Kansas	1,610	1,661	38,293	194	456,067	[4]358,699	19,594	14,948	2,711	1,935	723	30,001
27	South Atlantic	3,696	4,227	26,883	1,259	1,118,407	761,393	113,498	98,602	10,397	4,499	2,284	176,135
28	Delaware, Maryland, and District of Columbia	175	196	212	73	24,142	17,941	2,210	1,804	227	179	106	4,098
29	Virginia	710	755	787	143	137,543	89,095	17,029	14,400	1,719	910	613	25,045
30	West Virginia	2,053	2,322	24,936	305	736,026	[4]513,492	77,299	68,340	6,375	2,584	1,037	114,929
31	North Carolina	429	513	534	444	[3]39,566	[3]30,678	4,103	3,322	240	541	396	7,420
32	South Carolina	48	56	61	41	12,852	10,097	1,460	1,276	146	38	24	2,909
33	Georgia	168	192	179	127	43,439	32,724	4,497	3,928	426	143	72	8,783
34	Florida	160	193	174	126	[3]124,839	[3]67,366	6,900	5,532	1,264	104	36	12,951
35	East South Central	2,810	3,073	21,706	553	706,066	521,131	70,194	60,615	6,013	3,566	2,252	104,304
36	Kentucky	1,722	1,816	18,677	205	365,877	[4]272,103	41,255	35,820	3,075	2,360	1,472	59,659
37	Tennessee	620	665	677	158	82,815	61,108	10,275	8,839	737	699	504	16,291
38	Alabama	326	378	439	153	[3]137,141	[3]93,638	14,718	12,880	1,484	354	219	22,038
39	Mississippi	195	214	1,913	37	120,233	[4]94,282	3,946	3,076	717	153	57	6,316
40	West South Central	8,149	9,179	227,470	780	6,397,677	5,209,798	233,406	165,208	58,471	9,727	3,904	358,039
41	Arkansas	383	410	3,810	69	[3]136,241	[3] [4]107,904	6,311	4,985	925	401	169	9,986
42	Louisiana	828	895	17,569	115	1,194,947	[4]984,473	37,832	29,474	7,634	724	278	65,780
43	Oklahoma	2,475	2,610	59,120	183	[3]755,206	[3] [4]584,366	43,523	30,294	10,565	2,664	1,095	61,057
44	Texas	4,908	5,264	146,971	413	4,311,283	3,533,055	145,740	100,455	39,347	5,938	2,362	221,216
45	Mountain	3,867	4,551	24,346	904	1,768,451	1,305,463	88,776	68,713	15,949	4,114	2,611	140,458
46	Montana	540	578	4,692	102	[3]147,547	[3] [4]82,867	12,130	8,899	2,669	562	325	17,406
47	Idaho	215	249	242	145	[3]51,883	[3]38,558	4,917	4,121	646	150	107	8,622
48	Wyoming	445	483	5,980	57	[3]312,959	[3] [4]258,165	10,037	7,460	2,254	323	160	14,579
49	Colorado	921	1,020	2,510	180	[3]258,895	[3] [4]204,547	14,570	10,840	2,710	1,020	622	21,045
50	New Mexico	644	691	9,432	65	[3]403,274	[3] [4]338,096	14,494	11,545	2,389	560	295	23,599
51	Arizona	447	525	499	119	[3]217,936	[3]178,139	13,785	11,014	2,217	554	432	25,169
52	Utah	493	555	570	85	[3]273,486	[3]151,662	13,088	10,249	2,387	452	266	19,806
53	Nevada	408	450	421	151	[3]102,471	[3]53,429	5,755	4,585	677	493	404	10,232
54	Pacific	2,421	2,755	34,350	1,173	1,544,353	1,350,173	46,661	33,218	10,680	2,763	1,618	66,398
55	Washington	242	287	275	190	[3]31,404	[3]22,346	3,314	2,515	581	218	139	4,651
56	Oregon	264	278	260	213	18,263	12,646	1,732	1,280	156	296	185	2,588
57	California	1,938	2,190	33,815	770	[3]1,494,686	[3] [4]1,315,181	41,615	29,423	9,943	2,249	1,294	59,159

[1]Includes products purchased for resale without further processing.
[2]Includes mine water used.
[3]Excludes figures for the Uranium-radium-vanadium ores industry.

BY GEOGRAPHIC DIVISIONS AND STATES: 1954

captions, see INTRODUCTION)

Principal expenses designated below ($1,000)									Capital expenditures ($1,000)					Horsepower rating of power equipment			
Total	Wages and salaries: Production and development workers	Wages and salaries: All other employees	Minerals received for preparation	Supplies[1]	Purchased fuel	Purchased electric energy	Contract work	Purchased machinery installed ($1,000)	Total	Development and exploration of mineral property	Preparation plant and other construction	New machinery and equipment	Used plant and equipment	Aggregate horsepower (1,000)	Horsepower per production worker	Water intake[2] (million gallons)	
8,267,152	2,572,297	813,425	708,809	1,980,576	205,688	159,619	1,826,738	1,213,108	2,723,756	1,308,967	313,598	991,186	110,005	40,711	63	721,982	1
25,792	12,434	3,249	135	6,056	1,502	1,250	1,166	3,404	4,292	209	1,033	2,498	552	257	74	8,220	2
1,416	861	69	10	252	92	41	91	239	359	27	78	210	44	18	62	99	3
1,261	723	132	51	134	96	59	66	178	262	37	66	154	5	14	58	375	4
8,856	4,153	790	34	2,610	357	513	399	600	686	40	127	484	35	51	43	467	5
7,627	3,772	1,173	4	1,602	469	320	287	1,635	1,665	2	223	1,111	329	91	92	3,588	6
958	461	104	...	232	106	34	21	166	221	52	37	77	55	19	136	266	7
5,674	2,464	981	36	1,226	382	283	302	586	1,099	51	502	462	84	64	106	3,425	8
953,032	392,232	91,711	177,420	139,829	19,782	29,770	102,288	68,629	75,539	14,036	14,660	36,456	10,387	4,994	48	94,425	9
94,642	35,247	27,634	340	18,334	4,359	3,767	4,961	12,194	12,400	1,150	2,638	5,962	2,650	681	89	16,930	10
31,343	14,932	3,597	[3]482	7,734	1,720	1,595	1,283	3,477	4,029	846	959	2,040	184	208	60	7,560	11
827,047	342,053	60,480	[4]176,598	113,761	13,703	24,408	96,044	52,958	59,110	12,040	11,063	28,454	7,553	4,105	44	69,935	12
689,419	280,043	69,383	60,623	152,898	21,614	23,746	81,106	99,520	158,448	42,970	30,164	75,435	9,879	4,274	62	116,174	13
157,151	67,573	23,503	[4]10,735	33,405	6,053	4,633	11,249	19,722	24,576	4,874	2,982	13,708	3,012	1,043	60	31,259	14
85,808	29,866	8,287	18,418	17,339	2,261	3,139	6,498	12,772	15,908	3,020	1,665	10,108	1,115	544	57	14,132	15
269,419	107,174	19,673	[4]23,804	60,608	6,470	9,962	41,728	38,327	63,625	20,734	11,531	27,400	3,960	1,429	54	27,805	16
145,159	61,134	15,182	[4]6,922	32,277	4,947	4,581	20,116	23,513	46,762	13,266	11,777	20,660	1,059	940	68	37,865	17
31,882	14,296	2,738	744	9,275	1,883	1,431	1,515	5,186	7,577	1,076	2,209	3,559	733	318	91	5,113	18
528,633	167,642	45,724	10,280	133,908	24,587	15,664	130,828	104,617	199,102	65,984	36,139	88,403	8,576	3,649	85	54,527	19
167,555	56,495	18,977	4,580	43,714	6,520	6,506	30,763	25,622	64,046	17,733	25,919	19,878	516	1,229	89	15,122	20
19,229	7,894	1,210	14	6,223	1,847	515	1,526	3,731	3,805	143	417	2,604	641	284	121	4,686	21
52,376	24,371	6,689	[3]2,075	10,960	2,260	3,319	2,702	6,064	5,785	1,027	1,240	2,840	678	488	73	12.096	22
38,466	6,319	2,300	([5])	[4] [5]7,941	1,320	281	20,305	14,008	22,312	5,335	3,271	13,048	658	107	76	1,227	23
22,155	9,936	1,813	[3]592	6,026	1,124	395	2,269	2,101	3,536	1,143	692	1,427	274	130	52	3,565	24
22,220	5,735	898	([5])	[4] [5]5,391	1,319	218	8,659	8,395	16,387	7,325	567	7,732	763	158	110	2,889	25
206,632	56,892	13,837	[4]2,884	53,788	10,197	4,430	64,604	44,696	83,231	33,278	4,033	40,874	5,046	1,253	84	14,942	26
801,683	366,985	54,276	102,110	196,927	14,900	27,168	39,317	75,363	98,768	11,528	28,429	52,032	6,779	3,274	33	120,160	27
13,048	6,135	995	...	3,689	1,115	378	736	2,195	1,912	303	214	1,260	135	124	68	4,086	28
104,139	45,027	7,796	10,002	32,000	1,861	2,951	4,502	7,429	10,297	1,580	2,184	5,390	1,143	408	28	7,577	29
542,842	272,734	34,731	[4]58,982	130,170	4,457	14,996	26,772	46,161	59,004	8,579	16,942	29,594	3,889	1,946	28	19,882	30
19,661	9,192	1,179	[3]218	6,198	1,062	922	890	3,021	3,421	222	1,007	2,048	144	131	35	8,581	31
7,498	3,330	765	4	2,163	608	460	168	1,298	1,946	82	699	452	713	86	63	3,238	32
26,374	10,957	2,340	613	8,101	1,792	1,274	1,297	4,192	6,554	245	2,017	3,818	474	164	42	6,412	33
88,121	19,610	6,470	[3]32,291	14,606	4,005	6,187	4,952	11,067	15,634	517	5,366	9,470	281	415	75	70,384	34
449,549	206,919	33,087	39,311	107,392	8,961	12,384	41,495	44,401	69,011	23,634	10,843	28,955	5,579	1,973	33	39,992	35
245,050	124,149	15,164	[4]24,775	56,123	3,459	6,475	14,905	18,756	30,719	8,718	5,011	14,294	2,696	943	26	9,556	36
53,452	26,368	3,828	1,045	14,883	2,192	1,400	3,736	5,511	7,060	1,847	1,416	2,828	969	360	41	16,888	37
97,762	44,782	10,158	([5])	[3] [5]33,363	1,572	4,119	3,768	8,862	8,183	708	1,817	4,613	1,045	418	32	7,966	38
53,285	11,620	3,937	([5])	[4] [5]16,514	1,738	390	19,086	11,272	23,049	12,361	2,599	7,220	869	252	82	5,582	39
3,142,266	688,469	356,147	149,323	826,157	71,650	21,019	1,029,501	615,825	1,525,548	832,666	109,049	537,927	45,906	13,836	84	147,920	40
57,374	17,501	4,982	[3] [4]2,085	16,962	1,643	1,346	12,855	7,139	13,690	5,382	1,017	5,920	1,371	359	69	4,329	41
670,744	132,617	46,634	([5])	[4] [5]215,314	13,860	1,745	260,574	150,157	431,176	266,107	33,418	125,717	5,934	2,354	80	44,362	42
473,536	115,138	61,791	([5])	[4] [5]126,024	9,802	4,801	155,980	94,707	220,465	114,243	13,488	87,126	5,608	2,300	76	18,552	43
1,940,612	423,213	242,740	([5])	[4] [5]615,095	46,345	13,127	600,092	363,822	860,217	446,934	61,126	319,164	32,993	8,823	88	80,677	44
1,103,367	301,851	91,895	140,363	269,470	26,327	17,119	256,342	128,584	364,677	178,014	64,475	105,898	16,290	4,710	69	91,830	45
137,434	36,839	14,785	[3] [4]35,711	21,524	2,270	2,231	24,074	10,554	31,680	14,168	3,691	7,946	5,875	538	60	7,992	46
38,294	18,664	3,694	[3]2,672	9,191	906	1,380	1,787	3,254	5,820	2,236	762	2,433	389	223	54	6,814	47
146,658	32,385	13,339	[3] [4]1,399	37,896	3,959	1,534	56,146	25,319	71,475	40,704	5,312	23,803	1,656	682	91	14,605	48
153,598	43,934	15,610	[3] [4]3,355	42,523	4,302	3,124	40,750	24,767	56,479	27,302	8,218	18,814	2,145	701	65	8,686	49
212,016	51,274	14,510	[3] [4]5,773	61,571	4,500	1,816	72,572	41,036	121,656	66,903	15,273	36,701	2,779	825	71	9,557	50
146,605	53,889	12,695	[3]1,078	41,602	4,275	2,638	30,428	9,154	47,867	11,884	27,351	7,022	1,610	889	81	14,714	51
188,375	43,260	13,360	[3]5,609	33,327	3,863	2,391	16,565	10,090	19,438	9,076	2,647	6,577	1,138	498	49	21,461	52
80,387	21,606	3,902	[3]14,766	21,836	2,252	2,005	14,020	4,410	10,262	5,741	1,221	2,602	698	354	77	8,001	53
573,411	155,722	67,953	29,250	147,927	16,365	11,499	144,695	72,765	228,371	139,926	18,806	63,582	6,057	3,744	113	48,734	54
23,721	10,840	3,378	[3]214	5,921	948	680	1,740	2,387	2,857	475	489	1,448	445	400	159	5,041	55
12,862	5,485	828	66	3,350	948	290	1,895	2,759	3,691	263	1,580	1,074	774	141	110	2,479	56
536,828	139,397	63,747	[3] [4]28,970	138,656	14,469	10,529	141,060	67,619	221,823	139,188	16,737	61,060	4,838	3,203	103	41,214	57

[4]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the State totals.
[5]Figures for minerals received for preparation are included with those for supplies.

Table 4.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS IN THE

(For explanation of column captions and for statement on the minimum

	Major industry group, industry, and year	Number of operating companies	Number of mines, quarries, and wells	Number of prepa-ration plants	Value of ship-ments[1] ($1,000)	Value added in mining ($1,000)	Number of persons engaged: Produc-tion and develop-ment workers	Number of persons engaged: All other employees	Number of persons engaged: Proprietors and firm members: Total	Number of persons engaged: Proprietors and firm members: Per-forming manual labor	Man-hours worked by pro-duction and develop-ment workers (1,000)
	All mineral operations: Including crude petroleum and natural gas extraction:										
1	1954	32,932	514,347	8,814	15,147,297	11,740,054	666,621	139,347	40,176	20,958	1,288,461
2	1939	20,658	361,202	5,450	3,413,954	2,765,396	774,130	82,259	16,040	7,068	1,287,852
3	1919	(NA)	272,090	1,503	3,158,464	2,387,956	987,184	75,457	22,155	5,272	(NA)
	Excluding crude petroleum and natural gas extraction:										
4	1954	17,848	20,736	8,232	5,805,758	4,066,360	431,138	59,095	20,352	13,959	796,743
5	1939	11,310	13,557	4,716	1,754,123	1,429,122	625,134	45,105	8,310	5,213	1,022,824
6	1929	(NA)	12,506	(NA)	2,392,831	1,955,804	812,220	53,331	4,897	(NA)	(NA)
	Metal mining:										
7	1954	2,961	3,356	993	[3]1,506,238	[3]1,075,519	81,896	18,354	3,525	2,721	168,346
8	1939	1,886	2,095	693	517,375	416,956	89,791	10,344	1,169	824	190,835
9	1929	(NA)	2,007	(NA)	633,821	496,335	115,775	9,802	313	(NA)	(NA)
10	1919	(NA)	2,699	634	551,270	402,098	135,916	10,703	1,625	868	(NA)
	Iron ores:										
11	1954	94	298	123	547,218	435,668	28,216	5,954	73	46	53,288
12	1939	116	196	44	150,871	133,390	20,377	2,274	32	14	38,513
13	1929	(NA)	214	(NA)	197,335	167,127	28,623	2,490	9	(NA)	(NA)
14	1919	(NA)	424	74	218,218	177,402	46,339	3,037	41	9	(NA)
	Copper ores:										
15	1954	179	201	48	508,729	334,876	21,544	6,269	184	145	46,676
16	1939	35	51	27	145,590	108,494	23,844	2,908	...	...	51,239
17	1929	(NA)	180	45	283,517	221,690	44,502	3,465	76	(NA)	(NA)
18	1919	(NA)	226	57	181,258	130,167	43,717	3,179	103	62	(NA)
	Lead and zinc ores:										
19	1954	411	491	141	175,947	107,409	13,592	2,974	450	343	27,554
20	1939	208	260	124	72,648	47,310	15,731	1,994	89	48	32,481
21	1929	(NA)	375	188	112,428	84,793	25,907	1,818	78	(NA)	(NA)
22	1919	(NA)	473	262	75,579	53,623	21,884	1,734	412	186	(NA)
	Lode gold and silver ores:										
23	1954	384	392	159	40,665	31,740	3,699	576	366	289	8,108
24	1939	1,004	1,038	365	114,234	82,863	21,847	2,034	631	492	50,577
25	1929	(NA)	258	94	26,107	17,604	7,946	663	114	(NA)	(NA)
26	1919	(NA)	799	191	58,832	35,927	15,436	1,383	712	485	(NA)
	Placer gold:										
27	1954	131	136	116	5,916	3,614	501	55	173	145	1,255
28	1939	307	340	339	28,027	21,935	3,228	477	260	167	8,088
29	1929	(NA)	37	(NA)	3,779	2,582	578	90	18	(NA)	(NA)
30	1919	(NA)	132	2	9,369	5,847	1,380	149	122	77	(NA)
	Bauxite:										
31	1954	12	20	9	16,819	12,827	661	191	2	...	1,288
32	1939	10	12	11	2,527	1,965	727	100	...	...	1,176
33	1929	(NA)	11	(NA)	2,239	1,781	602	87	1	...	(NA)
34	1919	(NA)	15	(NA)	2,190	1,748	738	66	2	...	(NA)
	Manganese ores:										
35	1954	319	360	63	32,398	18,118	2,266	338	458	386	4,293
36	1939	26	34	14	945	707	504	41	12	4	959
37	1929	(NA)	21	(NA)	1,184	967	354	35	4	(NA)	(NA)
38	1919	(NA)	37	8	2,188	1,493	909	88	35	6	(NA)
	Tungsten ores:										
39	1954	500	524	171	60,737	40,744	2,635	352	714	634	6,327
40	1939	39	53	32	3,354	2,427	701	143	31	22	1,639
41	1929	(NA)	13	(NA)	734	540	186	31	3	...	(NA)
	Molybdenum ores and Ferro-alloy ores, except vanadium, n.e.c.:										
42	1954	155	158	63	60,536	48,537	1,937	550	243	194	4,502
43	1939	17	16	7	15,458	13,271	963	141	9	5	2,088
	Metal mining contract services:										
44	1954	114	xxx	xxx	38,679	26,703	2,863	196	82	55	6,519
45	1939	69	xxx	xxx	2,368	1,822	637	58	49	28	1,344

See footnotes at end of table.

UNITED STATES, BY INDUSTRY: 1954, 1939, 1929, and 1919

size of establishments included for each year, see INTRODUCTION)

Principal expenses designated Below ($1,000)						Purchased machinery installed ($1,000)	Capital expenditures ($1,000)				Horsepower rating of power equipment		Energy used (million kwh equivalent)	
Wages and salaries		Supplies	Fuel[2]	Purchased electric energy	Contract work		Development and exploration of mineral property	Preparation plant and other construction	New machinery and equipment	Used plant and equipment	Aggregate horsepower (1,000)	Horsepower per production worker		
Production and development workers	All other employees													
2,639,378	817,601	2,023,377	206,491	161,083	1,827,372	1,214,881	1,309,076	313,905	992,399	110,285	40,879	61	373,126	1
970,546	204,225	307,980	60,965	69,245	210,368	(NA)	(NA)	27,435	241,135	21,962	14,160	18	224,898	2
1,304,409	151,272	528,854	94,849	28,661	82,239	(NA)	334,015	(NA)	(NA)	(NA)	6,786	7	(NA)	3
1,662,783	331,753	855,028	109,681	126,066	269,513	351,676	79,118	155,083	224,649	40,499	20,778	48	88,030	4
750,111	106,278	220,789	34,718	62,144	7,350	(NA)	(NA)	16,217	52,666	9,451	9,059	14	77,131	5
1,099,895	139,023	298,198	49,146	71,769	17,914	86,733	89,646	(NA)	(NA)	(NA)	7,584	9	129,684	6
353,303	109,722	[3]229,913	26,936	32,662	117,079	86,891	64,569	84,313	65,655	6,530	5,113	62	21,087	7
127,111	26,806	68,719	10,400	18,686	2,616	(NA)	(NA)	5,409	14,775	3,342	2,264	25	14,647	8
178,319	27,647	93,951	17,098	18,975	7,462	25,391	59,682	(NA)	(NA)	(NA)	1,696	15	24,623	9
209,199	24,387	99,380	25,490	11,769	5,924	(NA)	56,668	(NA)	(NA)	(NA)	1,330	10	(NA)	10
119,688	37,221	75,866	9,549	13,767	47,515	36,994	23,515	32,790	27,955	718	1,795	64	5,928	11
27,431	5,895	10,791	2,280	4,174	236	(NA)	(NA)	784	3,550	210	600	29	3,246	12
41,049	6,385	18,717	5,332	4,607	1,552	4,016	10,223	(NA)	(NA)	(NA)	501	17	7,763	13
76,698	7,044	27,841	8,871	1,634	2,470	(NA)	17,360	(NA)	(NA)	(NA)	381	8	(NA)	14
98,491	37,574	72,822	8,576	6,278	43,873	23,821	23,750	35,265	21,955	1,240	1,545	72	9,255	15
34,486	8,078	23,562	4,168	4,899	511	(NA)	(NA)	1,822	2,577	1,507	753	32	6,693	16
73,200	10,136	43,995	9,210	6,027	2,595	13,084	22,151	(NA)	(NA)	(NA)	702	16	12,200	17
66,390	8,040	34,275	11,310	3,556	422	(NA)	13,302	(NA)	(NA)	(NA)	524	12	(NA)	18
53,676	17,687	24,673	1,409	6,838	6,080	5,942	6,509	2,054	2,509	448	749	55	1,641	19
20,253	5,084	10,580	848	3,550	363	(NA)	(NA)	390	778	339	353	22	1,556	20
39,191	5,053	18,344	1,536	6,102	1,653	3,752	8,172	(NA)	(NA)	(NA)	358	14	2,964	21
30,708	3,835	15,312	2,783	2,592	863	(NA)	4,269	(NA)	(NA)	(NA)	230	10	(NA)	22
15,409	2,898	7,184	674	991	684	1,356	1,624	728	590	301	148	40	720	23
33,321	4,973	16,261	1,595	3,921	1,140	(NA)	(NA)	1,890	3,588	615	335	15	1,830	24
12,983	1,738	5,934	558	1,317	694	1,509	5,641	(NA)	(NA)	(NA)	99	12	1,130	25
23,818	3,006	13,041	1,623	2,336	1,237	(NA)	7,863	(NA)	(NA)	(NA)	150	10	(NA)	26
1,997	314	1,554	248	661	41	302	180	52	121	151	64	128	170	27
5,632	1,162	3,780	700	1,471	141	(NA)	(NA)	135	3,348	442	110	34	510	28
970	260	590	1	604	2	359	76	(NA)	(NA)	(NA)	20	35	69	29
1,914	437	2,245	20	1,124	133	(NA)	201	(NA)	(NA)	(NA)	36	26	(NA)	30
2,529	1,052	789	239	134	1,603	356	24	11	271	4	49	74	170	31
578	241	269	187	60	46	(NA)	(NA)	20	173	7	13	18	270	32
513	277	216	122	38	82	96	13	(NA)	(NA)	(NA)	6	10	(NA)	33
942	157	304	138	...	...	(NA)	11	(NA)	(NA)	(NA)	3	3	(NA)	34
7,643	1,649	5,087	721	477	3,573	2,304	607	708	1,366	583	106	47	477	35
483	83	161	37	40	...	(NA)	(NA)	3	29	6	5	10	37	36
392	88	140	32	39	6	12	40	(NA)	(NA)	(NA)	2	7	73	37
1,086	134	448	52	46	149	(NA)	238	(NA)	(NA)	(NA)	6	6	(NA)	38
13,148	1,610	8,295	933	753	1,885	3,562	2,168	1,267	2,224	667	156	59	371	39
1,114	254	659	99	114	55	(NA)	(NA)	163	205	104	15	22	41	40
297	61	127	10	53	4	14	92	(NA)	(NA)	(NA)	3	18	(NA)	41
10,539	3,946	9,853	357	1,289	3,359	2,609	410	3,334	1,987	198	107	55	280	42
1,499	561	1,736	44	364	43	(NA)	(NA)	42	102	40	36	37	44	43
13,933	1,335	10,412	1,273	133	509	2,049	xxx	523	1,522	355	152	53	358	44
853	132	382	144	20	(NA)	(NA)	xxx	(NA)	(NA)	(NA)	23	36	(NA)	45

Table 4.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS IN THE

(For explanation of column captions and for statement on the minimum

	Major industry group, industry, and year	Number of operating companies	Number of mines, quarries, and wells	Number of prepa-ration plants	Value of ship-ments[1] ($1,000)	Value added in mining ($1,000)	Number of persons engaged				Man-hours worked by pro-duction and develop-ment workers (1,000)
							Produc-tion and develop-ment workers	All other employees	Proprietors and firm members		
									Total	Per-forming manual labor	
	Mercury ores:										
1	1954	81	87	75	4,519	3,355	372	81	125	110	841
2	1939	72	69	60	1,830	1,425	621	81	51	41	1,421
3	1929	(NA)	40	(NA)	2,820	2,042	1,029	88	10	(NA)	(NA)
4	1919	(NA)	26	24	1,803	1,235	748	71	27	11	(NA)
	Titanium ores:										
5	1954	7	8	8	12,750	11,134	568	275	1	1	1,261
6	1939	3	3	3	458	370	183	13	...	...	322
	Uranium-radium-vanadium ores:										
7	1954	572	636	8	(NA)	(NA)	2,944	523	614	339	6,227
8	1939	8	8	6	1,472	1,043	378	63	5	3	879
	Metallic ores, n.e.c.:										
9	1954	44	45	9	1,325	794	98	20	40	34	207
	Anthracite mining:										
10	1954	1,296	1,263	196	408,431	196,835	33,026	4,436	2,338	2,065	48,266
11	1939	359	518	163	201,126	154,023	83,112	5,480	301	161	124,462
12	1929	(NA)	303	(NA)	384,854	320,756	142,801	8,370	38	...	(NA)
13	1919	(NA)	534	324	364,084	289,049	147,372	7,351	159	34	(NA)
	Anthracite:										
14	1954	1,160	1,263	196	365,536	167,090	28,823	3,946	2,201	1,985	42,061
15	1939	289	518	163	189,648	146,418	80,429	5,284	232	139	120,085
	Anthracite stripping contract services:										
16	1954	131	xxx	xxx	42,048	29,079	4,074	482	126	72	6,038
17	1939	58	xxx	xxx	10,936	7,126	2,461	185	56	21	4,038
	Anthracite contract services, except stripping:										
18	1954	13	xxx	xxx	847	666	129	8	11	8	167
19	1939	13	xxx	xxx	542	479	222	11	13	1	339
	Bituminous coal and lignite mining:										
20	1954	6,104	6,844	628	2,068,183	1,418,384	199,655	19,178	7,760	5,485	325,769
21	1939	5,182	5,847	365	731,427	610,674	370,944	19,834	4,676	3,409	545,702
22	1929	(NA)	5,639	(NA)	966,694	819,976	458,835	23,686	2,983	(NA)	(NA)
23	1919	(NA)	8,308	134	1,145,978	962,833	546,269	33,626	4,242	1,832	(NA)
	Bituminous coal:										
24	1954	5,913	6,784	628	2,040,200	1,396,774	197,819	18,994	7,539	5,324	322,410
25	1939	5,021	5,716	365	727,358	607,318	369,265	19,690	4,497	3,271	542,310
	Lignite:										
26	1954	56	60	...	10,387	9,093	505	69	57	43	901
27	1939	130	131	...	3,457	2,879	1,480	115	144	118	3,027
	Bituminous coal and lignite mining contract services:										
28	1954	152	xxx	xxx	17,596	12,517	1,331	115	164	118	2,458
29	1939	32	xxx	xxx	612	477	199	29	35	20	365
	Crude petroleum and natural gas extraction:										
30	1954	15,099	493,611	582	9,341,539	[5]7,673,694	235,483	80,252	19,824	6,999	491,718
31	1939	9,348	347,645	736	1,659,831	1,242,473	148,996	37,154	7,730	1,855	265,028
32	1919[6]	(NA)	257,673	1,115	931,793	613,744	93,659	17,952	14,319	1,995	(NA)
	Crude petroleum and Natural gas:										
33	1954	9,720	485,907	xxx	7,070,097	6,129,213	109,792	62,714	13,316	3,886	216,581
34	1939	8,061	347,645	xxx	1,375,954	1,071,989	105,505	30,546	6,294	1,346	190,674
	Natural gas liquids:										
35	1954	181	xxx	582	640,422	(NA)	13,560	3,780	72	13	27,862
36	1939	295	xxx	736	96,338	(NA)	8,332	2,005	10	2	16,634
	Drilling oil and gas wells contract services:										
37	1954	2,846	7,372	xxx	972,745	623,967	62,145	5,831	3,399	1,684	133,216
38	1939	985	(NA)	xxx	128,107	(NA)	22,548	1,676	862	292	38,621

See footnotes at end of table.

UNITED STATES, BY INDUSTRY: 1954, 1939, 1929, and 1919—Continued

size of establishments included for each year, see INTRODUCTION)

Principal expenses designated below ($1,000)						Purchased machinery installed ($1,000)	Capital expenditures ($1,000)				Horsepower rating of power equipment		Energy used (million kwh equivalent)	
Wages and salaries		Supplies	Fuel[2]	Purchased electric energy	Contract work		Development and exploration of mineral property	Preparation plant and other construction	New machinery and equipment	Used plant and equipment	Aggregate horsepower (1,000)	Horsepower per production worker		
Production and development workers	All other employees													
1,607	365	(D)	204	61	28	226	167	176	116	56	12	31	78	1
752	164	229	139	33	4	(NA)	(NA)	68	139	54	10	16	92	2
1,383	220	464	230	69	15	618	460	(NA)	(NA)	(NA)	6	5	140	3
828	221	404	127	29	8	(NA)	162	(NA)	(NA)	(NA)	3	3	(NA)	4
2,397	1,302	(D)	449	743	335	1,286	...	2,904	1,092	2	46	81	361	5
140	42	38	15	35	...	(NA)	(NA)	15	72	...	2	12	18	6
11,908	2,660	9,844	2,263	505	7,462	5,336	5,494	4,289	3,842	1,168	165	56	1,266	7
497	112	244	140	...	45	(NA)	(NA)	77	169	17	7	18	224	8
338	109	(D)	41	32	132	748	121	212	105	639	19	(4)	12	9
113,932	21,997	29,027	3,932	8,787	51,226	9,270	1,438	2,241	4,767	2,048	1,506	46	7,198	10
107,798	12,252	25,489	3,920	6,524	11,170	(NA)	(NA)	1,771	2,882	322	1,092	13	19,716	11
229,967	21,282	43,367	7,420	6,509	6,802	5,580	7,902	(NA)	(NA)	(NA)	1,041	7	42,694	12
210,289	12,995	59,738	11,406	1,900	1,558	(NA)	6,190	(NA)	(NA)	(NA)	900	6	(NA)	13
98,678	19,392	20,224	2,038	8,397	50,156	5,667	1,438	2,148	3,367	931	1,072	37	6,589	14
104,378	11,482	22,496	3,275	6,430	11,029	(NA)	(NA)	1,771	1,974	221	1,019	13	19,455	15
14,809	2,571	8,651	1,868	390	1,068	3,529	xxx	93	1,371	1,073	433	106	602	16
3,166	749	2,956	619	94	141	(NA)	xxx	899		101	71	29	261	17
445	34	152	26	...	2	74	xxx	xxx	29	44	1	11	7	18
254	21	37	26	...	(NA)	(NA)	xxx		9		2	11	(NA)	19
764,863	109,442	322,916	17,111	47,802	55,188	121,640	3,601	34,168	66,206	14,836	6,332	32	15,351	20
432,188	44,488	88,516	5,432	24,895	1,910	(NA)	(NA)	5,321	22,471	2,967	3,373	9	22,587	21
574,919	58,647	106,560	7,529	30,739	1,890	34,947	16,928	(NA)	(NA)	(NA)	3,125	7	37,766	22
683,192	68,749	143,084	25,901	11,291	2,869	(NA)	31,298	(NA)	(NA)	(NA)	2,158	4	(NA)	23
757,175	108,474	319,298	15,712	47,512	54,231	118,481	3,586	33,948	63,845	14,382	6,093	31	14,854	24
430,564	44,183	88,093	5,299	24,749	1,899	(NA)	(NA)	5,305	22,357	2,947	3,344	9	22,339	25
2,177	411	627	239	254	206	607	15	134	479	11	75	148	144	26
1,384	219	342	80	145	11	(NA)	(NA)	16	73	20	21	14	248	27
5,511	557	2,991	1,160	36	751	2,552	xxx	86	1,882	443	164	123	353	28
240	86	81	53	1	(NA)	(NA)	xxx		41		8	42	(NA)	29
976,595	485,848	1,168,349	96,810	35,017	1,557,859	863,205	1,229,958	158,822	767,750	69,786	20,101	85	285,096	30
220,435	97,947	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	5,101	34	(NA)	31
135,397	33,879	226,903	20,071	973	70,102	(NA)	236,553	(NA)	(NA)	(NA)	1,827	20	(NA)	32
459,955	375,785	692,682	36,177	30,624	1,458,807	621,048	1,206,214	98,229	558,950	35,061	9,123	83	141,655	33
155,700	79,199	78,538	19,647	6,746	199,034	(NA)	(NA)	9,757	177,849	11,561	3,397	32	92,788	34
63,983	21,074	43,891	1,964	3,190	36,726	65,752	xxx	55,794	51,227	2,938	2,902	214	113,449	35
13,212	5,052	8,653	6,600	355	3,984	(NA)	xxx	1,461	10,620	949	772	93	54,979	36
264,797	39,515	298,789	36,704	320	46,048	120,385	23,416	1,939	99,722	28,391	4,265	69	23,302	37
36,020	5,917	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	678	30	(NA)	38

Table 4.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS IN THE

(For explanation of column captions and for statement on the minimum

	Major industry group, industry, and year	Number of operating companies	Number of mines, quarries, and wells	Number of preparation plants	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of persons engaged: Production and development workers	Number of persons engaged: All other employees	Number of persons engaged: Proprietors and firm members: Total	Number of persons engaged: Proprietors and firm members: Performing manual labor	Man-hours worked by production and development workers (1,000)
	Building, repairing, and dismantling rigs and derricks contract services:										
1	1954	120	...	xxx	11,657	9,552	1,539	93	131	68	1,720
2	1939	115	(NA)	xxx	9,155	(NA)	3,478	258	111	44	3,265
	Oil and gas field contract services, n.e.c.:										
3	1954	2,502	332	xxx	646,618	485,025	48,447	7,834	2,906	1,348	112,339
4	1939	519	(NA)	xxx	50,277	(NA)	9,133	2,669	453	171	15,834
	Nonmetallic minerals (except fuels) mining:										
	1954: Including operations										
5	classified in manufactures	7,571	9,273	6,415	1,822,906	1,375,622	116,561	17,127	6,729	3,688	254,362
6	Mineral industries only	6,623	8,054	6,211	1,582,192	1,181,986	97,081	16,347	6,561	3,568	214,799
7	1939	4,127	5,097	3,459	323,043	255,702	81,306	9,113	2,164	819	161,824
8	1929	(NA)	4,557	(NA)	407,461	318,737	94,808	11,473	1,563	(NA)	(NA)
	Dimension stone:										
	1954: Including operations										
9	classified in manufactures	523	558	204	78,903	61,774	11,389	936	467	253	23,155
10	Mineral industries only	322	352	...	18,945	15,155	3,068	156	299	133	5,893
	Mineral industries only:										
	Dimension limestone:										
11	1954	63	65	...	3,754	2,942	472	28	72	41	872
12	1939	33	40	...	1,541	1,368	617	55	13	(NA)	(NA)
	Dimension granite:										
13	1954	79	86	...	5,738	4,590	917	50	55	25	1,769
14	1939	75	91	...	3,268	2,674	1,163	75	59	(NA)	(NA)
	Dimension marble:										
15	1954	18	31	...	3,491	2,893	612	25	8	3	1,245
16	1939	13	19	...	879	721	652	17	5	(NA)	(NA)
	Dimension sandstone:										
17	1954	107	115	...	5,292	4,178	925	48	97	43	1,752
18	1939	25	25	...	641	501	269	18	22	(NA)	(NA)
	Dimension trap rock and Dimension stone, n.e.c.:										
19	1954	55	55	...	670	552	142	5	67	21	255
20	1939	4	4	...	27	19	24	...	4	3	36
	Crushed and broken stone:										
	1954: Including operations										
21	classified in manufactures	1,632	2,137	1,761	584,101	434,646	39,413	(NA)	(NA)	(NA)	88,136
22	Mineral industries only	1,474	1,882	1,761	465,254	337,611	33,124	4,280	1,261	595	75,559
	Mineral industries only:										
	Crushed and broken limestone:										
23	1954	1,174	1,443	1,362	328,757	239,604	24,925	3,315	1,017	490	56,335
24	1939	714	916	(NA)	55,172	41,430	17,655	1,726	507	(NA)	(NA)
25	1929	(NA)	785	(NA)	66,908	(NA)	16,443	(NA)	(NA)	(NA)	(NA)
	Crushed and broken granite:										
26	1954	75	99	88	30,875	22,201	2,344	206	55	24	5,607
27	1939	59	79	74	7,030	5,042	2,100	232	22	10	4,574
28	1929	(NA)	89	(NA)	6,751	(NA)	2,066	(NA)	(NA)	(NA)	(NA)
	Crushed and broken slate:										
29	1954	6	11	11	8,162	5,055	464	69	2	...	1,198
30	1939	6	11	11	2,137	1,236	407	43	...	...	803
31	1929	(NA)	6	(NA)	1,026	(NA)	214	(NA)	(NA)	(NA)	(NA)
	Crushed and broken marble:										
32	1954	14	17	16	5,142	3,661	379	52	2	2	796
33	1939	6	6	5	185	160	70	9	1	...	127
34	1929	(NA)	12	(NA)	471	(NA)	123	(NA)	(NA)	(NA)	(NA)
	Crushed and broken trap rock:										
35	1954	100	139	131	45,471	34,127	2,680	377	75	29	6,659
36	1939	97	116	115	9,632	7,340	1,886	278	34	11	4,001
37	1929	(NA)	131	(NA)	14,799	(NA)	2,877	(NA)	(NA)	(NA)	(NA)
	Crushed and broken sandstone:										
38	1954	60	86	74	31,190	22,913	1,529	182	46	23	3,283
39	1939	60	68	50	2,930	2,160	1,134	98	14	6	1,990
40	1929	(NA)	56	(NA)	2,718	(NA)	921	(NA)	(NA)	(NA)	(NA)
	Crushed and broken stone, n.e.c.:										
41	1954	83	87	79	15,657	10,050	803	79	64	27	1,681
42	1939	60	61	52	2,528	1,995	858	79	30	17	1,970
43	1929	(NA)	200	(NA)	6,954	(NA)	1,507	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

UNITED STATES, BY INDUSTRY: 1954, 1939, 1929, and 1919—Continued

size of establishments included for each year, see Introduction)

Principal expenses designated below ($1,000)						Purchased machinery installed ($1,000)	Capital expenditures ($1,000)				Horsepower rating of power equipment		Energy used (million kwh equivalent)	
Wages and salaries		Supplies	Fuel[2]	Purchased electric energy	Contract work		Development and exploration of mineral property	Preparation plant and other construction	New machinery and equipment	Used plant and equipment	Aggregate horsepower (1,000)	Horsepower per production worker		
Production and development workers	All other employees													
4,769	452	1,689	308	3	195	347	...	56	308	73	39	25	84	1
3,725	568	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	15	4	(NA)	2
183,091	49,022	131,298	21,657	880	16,083	55,673	328	2,804	57,543	3,323	3,772	78	6,606	3
11,778	7,211	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	239	26	(NA)	4
430,685	90,592	[7]273,172	[7]61,702	[7]36,815	[7]46,020	[8]133,875	[8]9,510	[8]34,361	[8]88,021	[8]17,085	[8]7,827	67	[8]44,394	5
363,604	86,416	230,371	60,899	35,351	45,386	132,102	9,401	34,054	86,808	16,805	7,659	79	43,792	6
83,374	21,641	38,065	14,966	12,040	2,270	(NA)	(NA)	3,716	12,634	2,820	2,311	29	20,289	7
114,691	31,678	54,319	17,098	15,547	1,760	20,814	5,135	(NA)	(NA)	(NA)	1,651	17	28,603	8
35,364	4,863	11,544	1,204	1,853	1,208	2,664	178	393	1,794	491	262	23	744	9
7,938	687	2,482	401	389	574	891	69	86	581	211	94	31	142	10
1,429	127	586	87	54	52	158	...	...	89	36	18	37	34	11
632	89	80	36	53	4	(NA)	(NA)	5	18	10	17	28	39	12
2,404	235	693	96	229	149	226	30	5	157	53	30	33	35	13
1,297	182	313	67	200	14	(NA)	(NA)	14	50	21	29	22	77	14
1,505	135	511	13	80	...	55	5	14	39	3	13	21	8	15
449	48	49	52	48	9	(NA)	(NA)	...	2	9	8	12	130	16
2,273	183	631	161	22	359	413	23	64	285	100	27	30	52	17
268	29	95	32	8	5	(NA)	(NA)	...	7	1	4	15	28	18
327	7	61	44	4	14	39	11	3	11	19	6	43	13	19
13	...	2	5	1	...	(NA)	(NA)	..	1	1	1	40	1	20
145,915	(NA)		149,697			(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	21
122,499	22,697	86,884	16,050	11,828	10,685	44,701	1,376	11,894	26,316	5,357	2,779	84	6,883	22
90,715	17,103	58,726	11,913	8,634	7,336	32,622	1,219	7,638	19,153	3,963	2,183	88	4,956	23
17,064	3,850	7,720	2,735	2,780	507	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	24
19,437	(NA)	12,693	2,399	2,592	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	276	17	(NA)	25
7,573	1,306	(D)	747	838	729	3,041	13	844	1,841	489	169	72	282	26
1,782	573	1,405	223	334	26	(NA)	(NA)	75	210	50	48	23	166	27
2,162	(NA)	1,273	209	359	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	38	18	(NA)	28
1,949	420	2,045	610	336	124	304	...	35	277	...	26	56	498	29
426	93	716	39	138	8	(NA)	(NA)	...	24	...	13	32	55	30
209	(NA)	120	21	56	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	5	23	(NA)	31
1,120	249	(D)	86	117	168	196	10	154	186	4	13	34	54	32
44	30	11	6	8	...	(NA)	(NA)	...	1	1	2	29	11	33
162	(NA)	19	5	31	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	2	16	(NA)	34
12,089	2,116	(D)	1,409	1,148	987	3,870	50	1,196	1,915	509	217	81	507	35
2,452	651	1,344	413	503	32	(NA)	(NA)	137	284	101	96	51	280	36
4,247	(NA)	2,104	372	618	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	61	21	(NA)	37
5,970	1,084	(D)	890	542	737	4,096	6	1,772	2,701	145	108	71	393	38
1,084	174	519	123	105	23	(NA)	(NA)	23	39	31	25	22	95	39
1,051	(NA)	473	70	144	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	15	16	(NA)	40
3,083	419	4,646	395	213	604	572	78	255	243	247	63	79	193	41
800	190	314	101	95	23	(NA)	(NA)	34	136	30	21	24	46	42
1,941	(NA)	1,423	145	219	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	26	17	(NA)	43

Table 4.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS IN THE

(For explanation of column captions and for statement on the minimum

	Major industry group, industry, and year	Number of operating companies	Number of mines, quarries, and wells	Number of preparation plants	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of persons engaged: Production and development workers	Number of persons engaged: All other employees	Number of persons engaged: Proprietors and firm members: Total	Number of persons engaged: Proprietors and firm members: Performing manual labor	Man-hours worked by production and development workers (1,000)
	Common sand and gravel:										
1	1954	3,196	3,766	3,156	435,662	334,046	28,423	5,667	3,408	1,852	65,600
2	1939	1,129	1,380	1,383	69,130	53,870	14,584	2,445	711	253	31,324
3	1929	(NA)	1,165	(NA)	102,312	81,159	15,994	3,672	249	(NA)	(NA)
	Glass sand:										
4	1954	40	44	38	18,591	13,701	1,144	151	26	11	2,505
5	1939	32	39	40	6,137	4,625	1,280	242	5	1	2,667
6	1929	(NA)	32	(NA)	5,359	4,082	1,030	95	...	(NA)	(NA)
	Foundry sand:										
7	1954	105	139	115	11,762	8,982	966	115	89	50	1,998
8	1939	97	144	105	4,136	3,440	1,095	131	80	36	1,794
9	1929	(NA)	128	(NA)	4,776	3,994	1,037	200	19	(NA)	(NA)
	Bentonite:										
10	1954	29	43	28	21,830	16,350	578	56	23	7	1,340
11	1939	27	29	20	1,982	1,463	357	62	4	1	687
	Fire clay:										
12	1954: Including operations classified in manufactures	279	357	61	31,819	24,335	3,022	(NA)	(NA)	(NA)	5,542
13	Classified in minerals industries only	180	252	61	22,206	17,468	1,802	185	167	74	3,123
14	1939	200	306	44	7,178	6,168	3,655	255	108	41	5,642
15	1929	(NA)	236	(NA)	10,753	8,469	4,139	363	72	(NA)	(NA)
16	1919	(NA)	350	45	10,086	8,090	5,453	447	187	48	(NA)
	Fuller's earth:										
17	1954	15	19	13	6,012	4,179	510	54	8	4	1,109
18	1939	21	22	18	2,107	1,402	562	116	2	...	1,051
19	1929	(NA)	24	(NA)	4,812	3,589	991	105	...	...	(NA)
20	1919	(NA)	9	8	2,019	1,372	824	49	...	...	(NA)
	Kaolin and ball clay:										
21	1954: Including operations classified in manufactures	48	69	38	33,424	26,748	2,843	(NA)	(NA)	(NA)	6,205
22	Classified in mineral industries only	40	61	38	31,892	25,249	2,820	328	19	7	6,159
23	1939	75	95	53	7,239	5,437	3,168	266	26	3	5,987
	Feldspar:										
24	1954	58	110	22	6,669	4,048	579	37	84	70	1,235
25	1939	47	59	2	981	859	512	54	39	21	1,016
26	1929	(NA)	58	(NA)	1,935	1,599	598	95	10	(NA)	(NA)
27	1919	(NA)	32	4	584	441	349	29	20	6	(NA)
	Magnesite and brucite:										
28	1954	4	4	1	1,655	1,372	121	11	1	1	237
29	1939	3	4	1	1,396	1,289	216	12	...	...	437
30	1929	(NA)	5	(NA)	2,044	1,448	351	27	...	...	(NA)
31	1919	(NA)	11	7	2,138	1,459	448	38	13	...	(NA)
	Clay, ceramic, and refractory minerals, n.e.c.:										
32	1954: Including operations classified in manufactures	674	802	84	39,038	29,109	3,653	(NA)	(NA)	(NA)	7,375
33	Classified in minerals industries only	169	184	84	13,504	9,783	1,053	98	99	50	2,174
34	1939	524	617	75	6,481	5,124	2,989	77	78	8	5,646
	Natural abrasives:										
35	1954	32	32	24	4,474	3,681	251	34	25	12	524
36	1939	27	36	25	1,335	1,115	383	60	12	3	798
	Barite:										
37	1954	36	45	35	18,269	14,051	1,036	89	35	18	2,403
38	1939	37	47	32	2,065	1,652	792	62	16	4	1,439
39	1929	(NA)	44	(NA)	1,802	1,489	844	71	9	(NA)	(NA)
40	1919	(NA)	98	5	1,592	1,276	919	59	93	3	(NA)
	Fluorspar:										
41	1954	94	105	33	15,461	9,914	997	263	114	82	2,001
42	1939	60	61	53	3,397	2,655	1,287	109	49	13	2,568
43	1929	(NA)	36	(NA)	2,858	2,038	1,053	118	13	(NA)	(NA)
44	1919	(NA)	72	25	3,335	2,392	1,124	119	36	7	(NA)
	Potash, soda, and borate minerals:										
45	1954	15	20	16	107,757	82,213	4,738	1,584	1	...	9,381
46	1939	15	17	13	17,031	13,330	2,049	389	6	1	4,388
	Phosphate rock:										
47	1954	53	73	54	117,976	62,089	4,579	861	44	21	10,119
48	1939	33	40	50	12,286	9,003	3,372	382	12	...	6,680
49	1929	(NA)	33	(NA)	13,044	9,497	3,201	305	2	(NA)	(NA)
50	1919	(NA)	69	20	10,300	6,155	4,373	374	14	...	(NA)

See footnotes at end of table.

UNTIED STATES, BY INDUSTRY: 1954, 1939, 1929, and 1919—Continued

size of establishments included included for each year, see INTRODUCTION)

Principal expenses designated below ($1,000)						Purchased machinery installed ($1,000)	Capital expenditures ($1,000)				Horsepower rating of power equipment		Energy used (million kwh equivalent)	
Wages and salaries		Supplies	Fuel[2]	Purchased electric energy	Contract work		Development and exploration of mineral property	Preparation plant and other construction	New machinery and equipment	Used plant and equipment	Aggregate horsepower (1,000)	Horsepower per production worker		
Production and development workers	All other employees													
111,600	26,958	57,481	19,758	8,797	13,919	45,825	1,573	7,420	27,254	7,917	3,068	108	7,978	1
16,482	5,447	7,432	4,156	3,273	399	(NA)	(NA)	870	3,752	1,028	643	44	3,645	2
22,780	10,746	11,917	3,990	4,921	325	7,174	...	(NA)	(NA)	(NA)	517	32	5,832	3
4,279	819	3,208	840	807	166	965	34	258	789	15	55	48	746	4
1,456	600	747	322	366	77	(NA)	(NA)	124	319	5	29	23	496	5
1,314	278	675	282	305	15	433	50	(NA)	(NA)	(NA)	13	13	542	6
3,087	570	928	775	393	607	904	42	188	515	82	87	90	333	7
884	346	314	154	166	62	(NA)	(NA)	35	167	31	27	25	140	8
1,291	606	354	180	127	121	356	12	(NA)	(NA)	(NA)	15	14	307	9
1,920	215	(D)	468	305	1,829	604	15	81	392	154	36	63	369	10
309	137	396	59	26	38	(NA)	(NA)	15	63	40	7	20	81	11
9,783	(NA)	7,359				(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	12
5,670	928	1,983	639	305	1,686	1,292	79	184	925	139	101	56	300	13
3,366	499	622	115	130	143	(NA)	(NA)	34	112	41	32	9	127	14
3,758	841	1,494	525	245	20	459	94	(NA)	(NA)	(NA)	32	8	944	15
5,367	842	1,417	398	55	126	(NA)	265	(NA)	(NA)	(NA)	21	4	(NA)	16
1,381	363	840	538	218	223	539	...	84	413	28	23	46	296	17
438	308	374	164	95	72	(NA)	(NA)	17	61	7	15	26	185	18
853	303	425	385	62	351	98	90	(NA)	(NA)	(NA)	8	8	411	19
541	94	338	294	6	9	(NA)	24	(NA)	(NA)	(NA)	3	3	(NA)	20
8,174	(NA)	8,352				(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	21
8,115	1,828	4,576	1,524	857	1,362	2,610	109	1,449	2,733	...	97	34	1,134	22
1,830	637	896	530	241	135	(NA)	(NA)	203	958	59	33	10	750	23
1,523	199	1,400	238	302	365	294	36	94	259	19	30	52	102	24
383	113	81	28	8	5	(NA)	(NA)	7	37	2	6	11	6	25
527	203	239	21	62	14	28	32	(NA)	(NA)	(NA)	7	11	25	26
264	53	98	21	12	12	(NA)	13	(NA)	(NA)	(NA)	2	5	(NA)	27
469	70	212	32	39	...	17	...	...	17	...	14	115	16	28
300	24	80	5	11	11	(NA)	(NA)	1	38	1	2	8	2	29
466	88	252	231	57	56	44	24	(NA)	(NA)	(NA)	3	9	247	30
652	95	301	258	38	51	(NA)	11	(NA)	(NA)	(NA)	3	6	(NA)	31
11,474	(NA)	10,620				(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	32
3,412	411	(D)	1,212	389	1,190	1,161	48	699	970	135	60	57	1,126	33
2,861	125	647	392	219	99	(NA)	(NA)	41	164	86	63	21	425	34
932	229	(D)	192	76	188	123	11	263	103	21	14	57	89	35
346	133	149	50	21	...	(NA)	(NA)	30	51	7	5	14	109	36
3,451	423	2,251	327	552	850	1,250	24	78	853	57	68	65	269	37
597	155	246	94	52	21	(NA)	(NA)	31	57	39	10	13	56	38
648	186	155	58	76	24	154	12	(NA)	(NA)	(NA)	6	7	84	39
769	110	219	50	19	10	(NA)	21	(NA)	(NA)	(NA)	3	3	50	40
3,451	1,415	2,195	495	513	804	561	140	145	429	35	49	49	380	41
1,134	228	506	118	61	57	(NA)	(NA)	106	429	27	21	16	358	42
1,112	290	626	153	24	17	140	157	(NA)	(NA)	(NA)	7	6	387	43
1,196	295	634	163	...	146	(NA)	393	(NA)	(NA)	(NA)	7	6	328	44
23,028	10,411	(D)	5,594	1,641	1,646	8,390	525	1,599	6,866	66	195	41	5,812	45
3,445	1,311	2,036	1,425	198	42	(NA)	(NA)	377	675	16	61	30	2,231	46
17,089	4,440	11,917	3,348	5,507	2,904	8,156	1,083	2,484	7,662	109	357	78	2,990	47
2,871	858	1,503	826	931	23	(NA)	(NA)	109	425	46	113	33	1,513	48
3,304	778	1,543	891	1,092	21	805	190	(NA)	(NA)	(NA)	104	33	1,648	49
3,901	761	2,162	1,740	79	164	(NA)	353	(NA)	(NA)	(NA)	50	11	2,296	50

Table 4.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS IN THE

(For explanation of column captions and for statement on the minimum

	Major industry group, industry, and year	Number of operating companies	Number of mines, quarries, and wells	Number of prepa-ration plants	Value of ship-ments[1] ($1,000)	Value added in mining ($1,000)	Number of persons engaged				Man-hours worked by pro-duction and develop-ment workers (1,000)
							Produc-tion and develop-ment workers	All other employees	Proprietors and firm members		
									Total	Per-forming manual labor	
	Rock salt:										
1	1954	11	15	13	35,658	30,013	1,659	266	3	1	3,861
2	1939	17	17	17	6,896	5,721	1,380	181	4	4	2,608
	Sulfur:										
3	1954	12	16	5	140,685	124,166	3,077	1,018	...	...	6,229
4	1939	8	10	2	31,812	28,863	1,517	507	1	1	3,031
5	1929	(NA)	10	(NA)	37,126	29,302	2,199	305	1	(NA)	(NA)
6	1919	(NA)	4	1	17,936	13,720	1,129	144	...	...	(NA)
	Chemical and fertilizer mineral mining, n.e.c.:										
7	1954	36	24	29	21,780	18,074	1,209	233	15	7	2,424
8	1939[10]	8	7	4	602	458	189	15	5	1	348
9	1919[9]	(NA)	42	23	2,890	1,850	1,357	121	13	4	(NA)
	Nonmetallic minerals (except fuels) contract services:										
10	1954	62	xxx	xxx	6,571	4,884	614	25	67	26	1,258
11	1939	65	xxx	xxx	966	725	307	28	68	27	632
	Gypsum:										
12	1954: Including operations classified in manufactures	38	61	22	31,861	27,642	1,428	(NA)	(NA)	(NA)	2,984
13	Classified in mineral industries only	34	34	22	6,631	5,352	399	50	21	7	926
14	1939	34	59	25	4,569	3,756	1,327	97	7	...	2,466
15	1929	(NA)	63	(NA)	5,740	4,516	2,078	134	2	(NA)	(NA)
16	1919	(NA)	48	27	6,806	4,612	2,191	282	4	3	(NA)
	Mica:										
17	1954	446	510	444	4,126	3,284	668	42	549	432	1,196
18	1939	22	21	10	327	276	190	20	11	7	361
19	1929	(NA)	32	(NA)	516	415	226	23	1	(NA)	(NA)
20	1919	(NA)	69	9	607	469	448	40	67	27	(NA)
	Native asphalt and bitumens:										
21	1954	9	12	8	6,424	4,857	451	100	12	3	987
22	1939	23	23	15	2,968	2,554	730	123	7	1	1,330
23	1929	(NA)	25	(NA)	5,124	4,345	1,123	183	1	(NA)	(NA)
24	1919	(NA)	12	...	750	343	324	63	...	...	(NA)
	Pumice and pumicite:										
25	1954	73	75	47	3,393	2,741	223	44	59	35	440
26	1939	15	17	14	387	301	122	5	12	5	197
	Talc, soapstone, and pyrophyllite:										
27	1954	54	75	39	11,819	9,486	1,297	174	30	14	2,778
28	1939	29	38	26	3,269	2,441	970	167	17	10	2,068
29	1929	(NA)	28	(NA)	2,688	2,012	550	82	...	...	(NA)
30	1919	(NA)	30	23	2,302	1,749	958	103	8	2	(NA)
	Peat:										
31	1954	86	87	68	2,326	1,800	321	32	69	42	637
32	1939	23	25	23	378	338	157	27	11	4	246
	Vermiculite and Nonmetallic minerals, n.e.c.:										
33	1954	63	75	57	24,860	17,437	1,374	394	33	14	2,703
3	1939	38	37	30	3,041	2,153	630	104	16	5	1,395
35	1929[10]	(NA)	12	(NA)	397	319	195	16	...	...	(NA)
36	1919	(NA)	35	19	1,119	685	565	82	11	3	(NA)

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. xxx Not applicable. [1]See table 1, footnote 5. [2]See table 1, footnote 7. [3]See table 2, footnote 3. [4]See table 2, footnote 6. [5]See table 2, footnote 4. [6]Represents figures for the Crude petroleum, Natural gas, and Natural gas liquids industries only. [7]Figures for fuels, electric energy, and contract work for crushed stone, clay, and gypsum operations classified in manufactures are included with figures for supplies. [8]Excludes figures for crushed stone, clay, and gypsum operations classified in manufactures. [9]Except for number of mines for 1939 excludes data for 2 Lithium minerals mines; for 1919, excludes data for 1 Pyrite establishment. [10]Except for number of mines, excludes data for 1 nonproducing establishment in the Asbestos industry.

UNITED STATES, BY INDUSTRY: 1954, 1939, 1929, and 1919

size of establishments included for each year, see Introduction)

Principal expenses designated below ($1,000)						Purchased machinery installed ($1,000)	Capital expenditures ($1,000)				Horsepower rating of power equipment		Energy used (million kwh equivalent)	
Wages and salaries		Supplies	Fuel[2]	Purchased electric energy	Contract work		Development and exploration of mineral property	Preparation plant and other construction	New machinery and equipment	Used plant and equipment	Aggregate horsepower (1,000)	Horsepower per production worker		
Production and development workers	All other employees													
7,117	1,454	5,351	335	367	244	1,534	53	873	1,259	1	48	29	549	1
1,434	540	868	153	151	3	(NA)	(NA)	149	143	69	23	17	336	2
14,619	6,567	14,055	5,629	44	2,833	2,803	3,069	3,110	2,635	31	159	52	12,854	3
2,545	1,911	1,690	1,128	15	116	(NA)	(NA)	(NA)	252	44	45	30	4,129	4
3,483	955	3,340	4,433	41	10	1,634	325	(NA)	(NA)	(NA)	34	15	7,318	5
1,682	413	1,452	2,764	...	...	(NA)	56	(NA)	(NA)	(NA)	15	14	1,858	6
4,569	1,357	(D)	193	394	439	3,360	258	1,372	2,795	30	53	44	223	7
204	37	95	7	34	8	(NA)	(NA)	3	15	...	3	13	6	8
1,559	225	699	191	62	88	(NA)	151	(NA)	(NA)	(NA)	9	7	288	9
2,214	113	1,088	354	11	213	402	xxx	19	306	56	39	63	96	10
320	48	124	113	4	(NA)	(NA)	xxx	(NA)	(NA)	(NA)	18	59	(NA)	11
5,572	(NA)	924		3,323		(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	12
1,567	285	(D)	171	140	72	2,395	13	48	402	1,960	28	71	85	13
1,640	217	624	37	146	6	(NA)	(NA)	27	254	22	29	22	29	14
2,628	307	795	137	285	7	578	127	(NA)	(NA)	(NA)	26	13	172	15
2,478	555	1,530	516	144	4	(NA)	12	(NA)	(NA)	(NA)	15	7	706	16
1,255	87	564	151	132	347	474	255	188	321	96	17	([4])	58	17
118	20	25	10	16	...	(NA)	(NA)	1	6	2	2	9	6	18
195	58	65	18	18	...	6	14	(NA)	(NA)	(NA)	2	8	20	19
288	47	108	21	2	7	(NA)	65	(NA)	(NA)	(NA)	1	2	28	20
1,443	704	1,251	137	85	170	476	114	24	402	12	31	69	66	21
608	284	317	68	28	1	(NA)	(NA)	26	72	17	13	18	125	22
1,255	586	518	138	39	84	182	39	(NA)	(NA)	182	13	12	285	23
295	136	376	25	...	6	(NA)	377	(NA)	(NA)	(NA)	1	2	43	24
748	214	(D)	119	40	276	298	32	98	99	186	26	115	56	25
119	7	45	30	11	...	(NA)	(NA)	4	9	4	2	20	19	26
4,141	799	1,671	238	467	412	486	300	453	407	37	36	28	133	27
807	382	619	45	162	2	(NA)	(NA)	62	65	38	12	12	53	28
615	217	531	29	99	17	35	57	(NA)	(NA)	(NA)	11	19	59	29
835	215	345	109	46	53	(NA)	59	(NA)	(NA)	(NA)	7	7	108	30
829	111	321	174	31	46	159	34	43	104	24	24	74	87	31
101	43	21	15	4	...	(NA)	(NA)	8	10	8	3	18	7	32
5,258	2,062	4,649	967	722	1,336	1,441	109	820	1,001	27	76	55	620	33
636	209	593	159	128	8	(NA)	(NA)	(NA)	64	4	13	21	197	34
237	34	36	27	13	2	89	93	(NA)	(NA)	(NA)	2	11	15	35
585		256	127		51	(NA)	47	(NA)	(NA)	(NA)	7	12	72	36

Table 5.--COMPARATIVE STATISTICS FOR MINERAL OPERATIONS IN THE UNITED STATES,

	Geographic division, State, and type of operations	Number of operating companies	Number of mines, quarries, and wells	Number of preparation plants	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of persons engaged			
							Production and development workers	All other employees	Proprietors and firm members	
									Total	Performing manual labor
1	East South Central...1954...	2,928	21,791	558	721,230	533,168	61,988	6,091	3,567	2,252
2	1939...	[3]1,228	11,211	357	158,481	130,532	89,522	4,427	760	443
3	Kentucky.....1954...	1,735	18,690	205	366,082	272,203	35,842	3,075	2,360	1,472
4	1939...	660	10,481	126	91,806	77,169	51,452	2,387	383	200
5	Tennessee.....1954...	635	702	160	88,267	65,241	9,416	765	699	504
6	1939...	220	297	88	22,684	18,435	11,723	739	116	69
7	Alabama.....1954...	351	474	156	145,888	110,860	13,602	1,534	355	219
8	1939...	290	341	106	41,852	33,849	25,758	1,195	240	168
9	Mississippi.....1954...	207	1,925	37	120,993	94,855	3,128	717	153	57
10	1939...	58	92	37	2,139	1,079	589	106	21	6
11	West South Central...1954...	8,233	227,597	808	6,416,352	5,224,592	166,957	58,476	9,734	3,907
12	1939...	[3]5,637	150,079	622	1,015,269	809,276	98,687	24,252	3,821	786
13	Arkansas.....1954...	395	3,823	71	138,879	110,107	5,206	925	402	170
14	1939...	286	3,127	52	31,348	22,150	6,926	551	171	61
15	Louisiana.....1954...	837	17,585	115	1,195,573	984,976	29,575	7,634	724	278
16	1939...	531	6,569	62	133,828	92,879	12,244	2,232	263	47
17	Oklahoma.....1954...	2,488	59,137	185	758,124	586,635	30,534	10,566	2,668	1,095
18	1939...	1,443	50,619	223	208,713	173,015	26,188	7,124	984	267
19	Texas.....1954...	4,966	147,052	437	4,323,776	3,542,874	101,642	39,351	5,940	2,364
20	1939...	3,377	89,764	285	641,380	521,232	53,329	14,345	2,403	411
21	Mountain.....1954...	3,911	24,404	916	1,778,268	1,313,850	69,114	15,952	4,124	2,644
22	1939...	[3]2,159	9,746	462	361,243	283,834	66,711	7,385	1,364	915
23	Montana.....1954...	544	4,697	104	148,747	83,942	8,936	2,669	562	325
24	1939...	474	2,363	70	44,701	34,865	10,291	1,308	362	226
25	Idaho.....1954...	223	250	150	52,083	38,737	4,135	646	154	111
26	1939...	108	111	49	23,389	18,952	4,654	395	59	41
27	Wyoming.....1954...	446	5,981	58	313,659	258,503	7,491	2,254	323	160
28	1939...	162	2,762	17	38,871	32,679	6,204	644	82	52
29	Colorado.....1954...	941	2,533	182	262,214	207,541	10,977	2,713	1,024	649
30	1939...	510	767	109	52,291	41,875	13,469	1,331	349	267
31	New Mexico.....1954...	646	9,434	66	403,306	338,096	11,545	2,389	560	295
32	1939...	277	3,081	30	59,160	44,683	8,065	856	161	63
33	Arizona.....1954...	455	507	120	219,031	179,001	11,073	2,217	556	434
34	1939...	178	179	59	54,230	40,560	9,400	989	122	91
35	Utah.....1954...	499	577	85	275,157	153,235	10,298	2,387	452	266
36	1939...	173	198	38	63,037	51,550	9,529	1,303	67	47
37	Nevada.....1954...	409	425	151	104,071	54,795	4,659	677	493	404
38	1939...	277	285	90	25,564	18,670	5,099	559	162	128
39	Pacific.....1954...	2,508	34,456	1,189	1,566,056	1,367,855	34,137	10,682	2,780	1,632
40	1939...	[3]2,079	17,730	638	400,422	333,283	38,764	7,635	1,230	573
41	Washington.....1954...	263	299	191	34,998	25,182	2,647	581	219	140
42	1939...	157	174	79	13,694	11,075	3,894	354	114	74
43	Oregon.....1954...	279	278	218	18,872	13,168	1,331	156	297	186
44	1939...	119	128	81	5,120	3,807	1,309	167	70	35
45	California.....1954...	1,991	33,879	780	1,512,186	1,329,505	30,159	9,945	2,264	1,306
46	1939...	1,803	17,428	478	381,608	318,401	33,561	7,114	1,046	464

[1]See table 1, footnote 5. The United States total shown is not equal to the sum of the detail by area since the estimated value of minerals produced and used in the same establishment was based on a rough industry average for the United States total, but for individual States reflects market values in the specified State.

BY GEOGRAPHIC DIVISIONS AND STATES: 1954 AND 1939—Continued

Man-hours worked by production and development workers (1,000)	Principal expenses designated below ($1,000)						Selected capital expenditures ($1,000)			Horsepower rating of power equipment		Energy used (million kwh equivalent)	
	Wages and salaries		Supplies	Fuel[2]	Purchased electric energy	Contract work	Preparation plant and other construction	New machinery and equipment	Used plant and equipment	Aggregate horsepower (1,000)	Horsepower per production worker		
	Production and development workers	All other employees											
107,058	210,951	33,464	110,194	8,981	12,504	41,500	10,848	29,029	5,591	1,987	32	9,867	1
[2]134,469	86,990	9,033	18,952	2,031	4,947	2,020	1,365	5,815	619	737	8	5,003	2
59,702	124,206	15,164	56,228	3,459	6,475	14,905	5,011	14,294	2,696	943	26	3,514	3
73,891	52,338	4,633	10,217	771	2,565	1,084	564	2,431	359	332	6	2,383	4
17,412	28,044	3,993	15,956	2,202	1,436	3,741	1,416	2,844	981	363	39	1,122	5
19,578	10,459	1,486	2,602	590	968	89	223	935	72	137	12	1,421	6
23,526	46,947	10,370	21,777	1,582	4,203	3,768	1,822	4,671	1,045	429	32	1,261	7
39,827	23,764	2,685	5,859	501	1,342	301	560	2,205	133	254	10	1,015	8
6,418	11,754	3,937	16,233	1,738	390	19,086	2,599	7,220	869	252	81	3,970	9
1,173	429	229	274	169	72	546	18	244	55	14	24	184	10
361,436	693,048	356,174	839,553	71,680	21,079	1,029,511	109,049	537,948	45,916	13,843	83	217,320	11
176,345	137,938	65,294	61,051	17,062	4,932	122,948	6,172	117,489	9,016	3,231	33	106,337	12
10,425	17,995	4,982	17,394	1,645	1,347	12,855	1,017	5,920	1,371	359	69	3,859	13
10,737	7,446	1,288	2,792	874	374	5,158	149	3,779	381	142	20	3,306	14
65,982	132,855	46,634	215,291	13,860	1,745	260,574	33,418	125,717	5,934	2,354	80	43,447	15
22,496	18,351	6,024	10,474	3,367	447	26,661	917	22,986	515	340	28	16,448	16
61,532	115,830	61,793	109,077	9,805	4,818	155,980	13,488	87,132	5,615	2,301	75	31,291	17
46,857	33,892	18,656	15,689	4,349	1,871	13,789	1,028	8,228	3,398	1,027	39	23,132	18
223,497	426,368	242,765	497,791	46,370	13,169	600,102	61,126	319,179	32,996	8,829	87	138,723	19
96,255	78,249	39,326	32,096	8,472	2,240	77,340	4,078	82,496	4,722	1,722	32	63,451	20
141,253	303,088	91,903	270,733	26,332	17,120	256,407	64,475	105,900	16,290	4,711	68	38,379	21
129,846	93,717	18,034	47,093	6,643	10,431	13,242	4,282	15,704	3,049	1,472	22	18,846	22
17,478	36,979	14,785	21,649	2,270	2,231	24,074	3,691	7,946	5,875	538	60	2,525	23
19,862	14,701	3,021	6,940	514	1,799	583	393	1,995	334	230	22	1,237	24
8,651	18,711	3,694	9,212	906	1,380	1,787	762	2,435	389	223	54	527	25
9,753	7,086	1,060	3,275	246	814	102	143	639	132	83	18	233	26
14,641	32,508	13,339	38,258	3,959	1,534	56,146	5,312	23,803	1,656	682	91	9,543	27
10,189	8,765	1,677	2,206	388	422	3,176	99	1,957	148	129	21	1,856	28
21,317	44,381	15,618	42,811	4,307	3,125	40,815	8,218	18,814	2,145	702	64	4,873	29
23,356	16,845	2,978	7,134	854	1,827	601	465	1,503	272	201	15	2,113	30
23,599	51,274	14,510	61,571	4,500	1,816	72,572	15,273	36,701	2,779	825	71	12,384	31
14,817	10,605	2,115	5,243	1,393	319	7,522	984	5,307	344	166	21	9,234	32
25,286	54,081	12,695	41,835	4,275	2,638	30,428	27,351	7,022	1,610	889	80	3,747	33
22,059	14,561	2,505	10,457	2,024	1,059	130	809	1,707	1,462	282	30	2,372	34
19,903	43,260	13,360	33,327	3,863	2,391	16,565	2,647	6,577	1,138	498	48	3,851	35
18,466	13,274	3,340	7,650	574	3,001	262	552	1,344	131	275	29	1,346	36
10,378	21,894	3,902	22,070	2,252	2,005	14,020	1,221	2,602	698	354	76	929	37
11,344	7,880	1,338	4,188	650	1,190	866	837	1,252	226	106	21	455	38
68,232	159,471	67,960	151,945	16,372	11,514	144,706	18,811	63,588	6,074	3,746	110	39,102	39
77,826	64,350	20,755	31,507	8,188	6,662	20,782	3,938	36,720	1,973	1,484	38	29,396	40
4,912	11,403	3,378	6,679	948	680	1,740	489	1,448	445	400	151	404	41
6,608	5,376	827	1,923	250	381	65	194	343	60	78	20	251	42
2,690	5,718	828	3,448	947	291	1,899	1,582	1,076	774	141	106	349	43
2,672	1,627	328	877	258	163	15	87	185	50	33	25	143	44
60,630	142,350	63,754	141,818	14,477	10,543	141,067	16,740	61,064	4,855	3,205	106	38,349	45
68,546	57,347	19,600	28,707	7,680	6,118	20,702	3,657	36,192	1,863	1,373	41	29,002	46

[2]See table 1, footnote 7.

[3]Represents the sum of the number of operating companies in individual States. Hence, includes some duplication due to the same company operating in more than one State.

Table 6.—VALUE OF SHIPMENTS OF PRIMARY PRODUCTS OF THE MINERAL INDUSTRIES PRODUCED IN ALL INDUSTRIES AND VALUE OF SECONDARY PRODUCTS AND SERVICES OF THE MINERAL INDUSTRIES IN THE UNITED STATES, BY INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Code	Industry	Value of all products of the industry ($1,000)	Value of primary products ($1,000)				Value of secondary products and services ($1,000)				
			Gross shipments by establishments in the specified industry	Net shipments[1]			Total	Secondary products	Receipts for contract services	Electric energy sold	Products purchased and resold without further processing
				Total	By establishments in the specified industry	By establishments in other industries[2]					
10	Metal Mining:										
101	Iron ores	547,218	(D)	*537,688*	(D)	(D)	(D)	(D)	615	1,487	...
102	Copper ores	508,729	484,161	*393,941*	*385,343*	8,598	*24,568*	21,474	512	2,582	...
103	Lead and zinc ores	175,947	172,602	*138,617*	*136,787*	1,830	3,345	2,928	395	22	...
104	Gold and silver ores:										
1042	Lode gold	28,517	28,507	*27,447*	*26,882*	565	10	(D)	(D)	...	...
1043	Placer gold	5,916	5,898	5,965	5,898	67	18	(D)	(D)	(D)	...
1044	Silver ores	12,148	(D)	*11,956*	(D)	(D)	(D)	(D)	(D)	...	...
105	Bauxite	16,819	16,736	*15,946*	*15,946*	...	83	57	26	...	...
	Ferro-alloy ores, except vanadium:										
106	Manganese ores	32,398	31,298	31,537	31,298	239	1,100	(D)	(D)	...	...
1064	Tungsten ores	60,737	60,222	62,832	60,222	2,610	515	423	8	...	84
1063 1069	Molybdenum ores and Ferro-alloy ores, n.e.c	60,536	56,714	56,714	56,714	...	3,822	3,822	...	...	...
1081	Metal mining contract services[3]	38,679	37,362	(NA)	(NA)	(NA)	1,317	...	1,177	...	140
109	Miscellaneous metal ores:										
1092	Mercury ores	4,519	4,519	(D)	(D)	...	...	...	...	...	...
1093	Titanium ores	12,750	8,647	(D)	(D)	...	4,103	4,103	...	...	...
1094	Uranium-radium-vanadium ores	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1099	Metallic ores, n.e.c	1,325	1,289	1,289	1,289	...	36	36	...	...	...
11	Anthracite mining:										
1111	Anthracite	365,536	363,299	*246,276*	*246,276*	...	2,237	282	215	1,740	...
1112	Anthracite stripping contract services[3]	42,048	42,048	(NA)	(NA)	(NA)	...	...	...	...	...
1113	Anthracite contract services, except stripping[3]	847	847	(NA)	(NA)	(NA)	...	...	...	...	...
12	Bituminous coal and lignite mining:										
1211	Bituminous coal	2,040,200	[6]2,035,794	*1,774,983*	*1,773,930*	1,053	4,406	866	1,260	2,280	([6])
1212	Lignite	10,387	10,330	10,330	10,330	...	57	33	24	...	...
1213	Bituminous coal and lignite mining contract services[3]	17,596	[4]17,596	(NA)	(NA)	(NA)	([4])	...	(D)	...	(D)
13	Crude petroleum and natural gas extraction:										
1312 1313	Crude petroleum and Natural gas	7,070,097	7,035,108	*7,095,624*	7,035,108	60,516	34,989	36	34,713	205	35
1314 1315	Natural gas liquids	640,422	634,384	*576,828*	*576,828*	...	6,038	1,308	4,578	152	...
133	Oil and gas field contract services[3]	1,631,020	1,506,501	(NA)	(NA)	(NA)	124,519	60,516	10,000	...	54,003
14	Nonmetallic minerals (except fuels) mining:										
141	Dimension stone:										
1412	Dimension limestone	3,754	3,170	7,255	3,170	4,085	584	222	6	...	356
1413	Dimension granite	5,738	5,649	10,385	5,649	4,736	89	(D)	...	...	(D)
1415	Dimension marble	3,491	3,421	3,869	3,421	448	70	70	...	...	...
1417	Dimension sandstone	5,292	5,036	6,129	5,036	1,093	256	50	35	...	171
1416 1419	Dimension trap rock and Dimension stone, n.e.c	670	651	780	651	129	19	(D)	(D)	...	(D)
142	Crushed and broken stone:										
1422	Crushed and broken limestone	328,757	310,967	*328,434*	[5]*311,525*	16,909	17,790	12,622	1,910	99	3,159
1423	Crushed and broken granite	30,875	30,016	*31,766*	[5]*30,476*	1,290	859	610	...	6	243
1424	Crushed and broken slate	8,162	8,162	*8,199*	(D)	(D)	..	...	...	...	...
1425	Crushed and broken marble	5,142	4,545	*5,039*	[5]*4,586*	453	597	497	...	...	100
1426	Crushed and broken trap rock	45,471	38,974	*40,280*	[5]*38,555*	1,725	6,497	5,542	25	6	924
1427	Crushed and broken sandstone	31,190	28,351	28,697	(D)	(D)	2,839	2,382	36	...	421
1429	Crushed and broken stone, n.e.c	15,657	14,849	17,194	[5]16,883	311	808	(D)	82	...	(D)
144	Sand and gravel	466,015	408,546	425,500	408,546	16,954	57,469	38,949	7,969	...	10,551
145	Clay, ceramic, and refractory minerals:										
1452	Bentonite	21,830	(D)	*21,157*	(D)	(D)	(D)	(D)	(D)	...	..
1453	Fire clay	22,206	20,808	*21,643*	*20,648*	995	1,398	(D)	287	(D)	(D)
1454	Fuller's earth	6,012	(D)	6,029	(D)	(D)	(D)	(D)	...	...	...
1455	Kaolin and ball clay	31,892	31,160	*31,170*	*31,146*	24	732	732	...	...	...
1456	Feldspar	6,669	6,254	*7,478*	*5,824*	1,654	415	415	...	...	...
1457	Magnesite and brucite	1,655	1,655	1,655	1,655	...	...	...	...	...	...
1459	Clay, ceramic, and refractory minerals, n.e.c	13,504	(D)	*14,561*	(D)	(D)	(D)	(D)	(D)	...	...

See footnotes at end of table.

Table 6.—VALUE OF SHIPMENTS OF PRIMARY PRODUCTS OF THE MINERAL INDUSTRIES PRODUCED IN ALL INDUSTRIES AND VALUE OF SECONDARY PRODUCTS AND SERVICES OF THE MINERAL INDUSTRIES IN THE UNITED STATES, BY INDUSTRY: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

Code	Industry	Value of all products of the industry ($1,000)	Value of primary products ($1,000)				Value of secondary products and services ($1,000)				
			Gross shipments by establishments in the specified industry	Net shipments[1]			Total	Secondary products	Receipts for contract services	Electric energy sold	Products purchased and resold without further processing
				Total	By establishments in the specified industry	By establishments in other industries[2]					
14	Nonmetallic minerals (except fuels) mining—Continued										
146	Natural abrasives, except sand:										
1462	Abrasive stones, natural	326	324	*415*	324	91	2	2	...	...	...
1469	Natural abrasives, except sand, n.e.c	4,148	3,969	*5,220*	3,969	*1,251*	179	(D)	(D)	...	...
147	Chemical and fertilizer mineral mining:										
1472	Barite	18,269	(D)	18,298	(D)	(D)	(D)	(D)	(D)	...	(D)
1473	Fluorspar	15,461	14,502	*12,774*	*12,774*	...	959	(D)	(D)	(D)	...
1474	Potash, soda, and borate minerals	107,757	105,452	*104,070*	(D)	(D)	2,305	(D)	(D)	(D)	...
1475	Phosphate rock	117,976	117,909	*82,516*	*82,516*	...	67	...	(D)	(D)	...
1476	Rock salt	35,658	30,769	32,962	30,769	2,193	4,889	4,812	...	...	77
1477	Sulfur	140,685	140,661	140,661	140,661	...	24	...	...	24	...
1479	Chemical and fertilizer mineral mining, n.e.c	21,780	(D)	*20,448*	(D)	(D)	(D)	(D)	(D)	(D)	(D)
1481	Nonmetallic minerals (except fuels) contract services[3]	6,571	6,013	(NA)	(NA)	(NA)	558	...	288	...	270
149	Miscellaneous nonmetallic minerals (except fuels):										
1492	Gypsum	6,631	6,613	10,301	6,613	3,688	18	...	...	(D)	(D)
1493	Mica	4,126	4,083	7,938	4,083	3,855	43	43	...	...	...
1494	Native asphalt and bitumens	6,424	6,408	6,408	6,408	...	16	...	16	...	...
1495	Pumice and pumicite	3,393	3,324	3,489	3,324	165	69	(D)	...	...	(D)
1496	Talc, soapstone, and pyrophyllite	11,819	11,819	14,595	11,819	2,776	...	...	...	...	...
1498	Peat	2,326	2,307	2,307	2,307	...	19	(D)	(D)	...	...
1497 1499	Vermiculite and Nonmetallic minerals, n.e.c	24,860	24,698	24,731	24,698	33	162	(D)	(D)	...	(D)

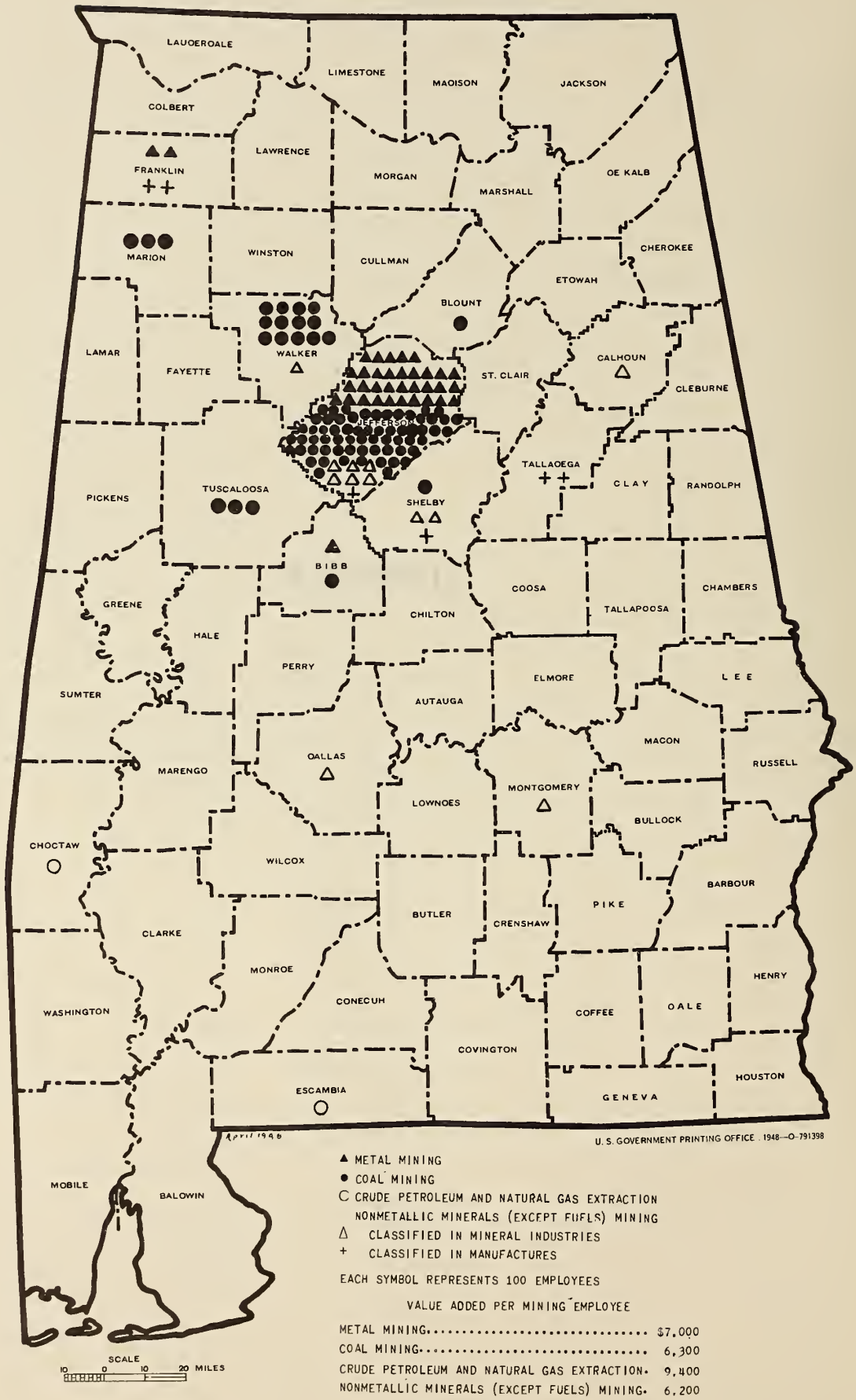
D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]Net shipments, which are equal to gross shipments less cost of minerals received for preparation, are not available for all industries. Accordingly, wherever net shipments figures are available, they are shown in italics. Otherwise, figures represent gross shipments.
[2]Represents other mineral industries, manufacturing industries, and wholesale trade industries.
[3]Figures for "primary products" for this industry represent receipts for services classified as primary to this industry.
[4]The value of secondary products and services is included with the value of primary services, for this industry.
[5]Includes value of primary products of this industry shipped by establishments in other mineral industries.
[6]Includes bituminous coal, sold for $75,866 thousand, purchased by establishments in the Bituminous coal industry for resale without further processing. This value is included in the gross shipments of primary products.

ALABAMA

101-1

MINING IN ALABAMA: 1954

Rank among States:
Employment, 14
Value of shipments, 20



▲ METAL MINING
● COAL MINING
C CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
Δ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$7,000
COAL MINING	6,300
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	9,400
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	6,200

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and limestone quarries operated or part of cement and lime plants					
	1954	1939[1]	1929[2]	1954	1939[1]	1929[3]	1919[4]	1909	1902[5]
Number of operating companies	351	290	(NA)	295	[6]258	(NA)	(NA)	[6]184	[6]177
Number of establishments	413	(NA)	222	340	(NA)	205	264	225	(NA)
Number of mines and quarries	373	341	255	300	293	234	348	315	265
Number of oil and gas wells producing at end of year	101	...	(NA)	101	...	(NA)	...	...	...
Number of preparation plants	156	106	(NA)	118	85	(NA)	(NA)	(NA)	(NA)
Value of shipments[7]...$1,000	145,888	41,852	54,666	135,719	40,095	52,742	59,866	24,351	17,368
Value added in mining...do	100,869	33,849	43,342	92,823	32,584	41,806	49,138	19,883	15,056
Number of persons engaged, total	15,491	27,193	33,781	14,608	26,302	33,179	34,632	30,171	20,134
Production and development workers	13,602	25,758	31,978	12,801	24,955	31,429	32,579	28,300	[8]19,177
All other employees	1,534	1,195	[9]1,757	1,483	1,123	[9]1,707	2,012	1,793	957
Proprietors and firm members	355	240	46	324	224	43	41	78	(NA)
Performing manual labor	219	168	(NA)	207	164	(NA)	6	12	(NA)
Man-hours worked by production and development workers...1,000	23,526	39,827	(NA)	21,795	[10]38,990	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	101,670	34,452	46,184	97,615	33,187	45,099	50,893	20,434	13,660
Wages of production and development workers...do	46,947	23,764	30,938	44,732	23,148	30,413	36,230	14,277	10,360
Salaries of all other employees...do	10,370	2,685	[9]3,922	10,212	2,528	[9]3,782	3,935	1,689	988
Minerals received for preparation...do	13,023	(NA)	(NA)	13,023	(NA)	(NA)	...	128	(NA)
Supplies...do	[11]21,777	5,859	8,341	20,563	5,570	8,083	7,481	2,517	2,045
Purchased fuel[12]...do	[11]1,582	501	769	1,344	407	669	2,431	1,049	
Purchased electric energy...do	[11]4,203	1,342	2,119	4,079	1,239	2,057	649		
Contract work...do	[11]3,768	301	95	3,662	295	95	167	774	267
Purchased machinery installed...do	[13]8,920		1,793	8,248		1,793	(NA)		
Capital expenditures, total...do	[13]8,256	(NA)	(NA)	8,025	(NA)	(NA)	(NA)		
Development and exploration of mineral property...do	[13]718		1,656	717		1,656	898	(NA)	(NA)
Preparation plant construction...do	[13]1,170	560		1,162	[10]500				
Other construction...do	[13]652		(NA)	648		(NA)	(NA)		
New machinery and equipment...do	[13]4,671	2,205		4,524	[10]2,184				
Used plant and equipment...do	[13]1,045	133		974	[10]126				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	[13]429	254	271	395	[10]247	260	146	92	32
Per production worker	32	10	8	31	10	8	4	3	2
Prime movers...1,000	[13]144	47	55	119	[10]42	49	93	91	32
Electric motors driven by purchased energy...do	[13]285	207	216	276	[10]205	211	53	1	...
Horsepower rating of electric motors driven by energy generated at establishment...do	[13]79	79	12	79	[10]79	12	30	12	( )
Energy used...million kwh equivalent	[13]1,261	1,815	2,615	988	1,589	2,464	(NA)		
Coal[14]...1,000 short tons	[13]40	148	296	17	[10]135	278	761		
Fuel oils...1,000 barrels	[12]115	25	4	96	[10]20	2	(15)	(NA)	(NA)
Gas[14]...million cu.ft	[13]452	13	...	389	...	...	...		
Electric energy purchased...million kwh	[13]416	166	235	405	[10]162	234	(NA)		
Electric energy generated and used...do	...	93	49	...	[10]93	49	(NA)		

NA Not available. [1]Excludes data for dimension stone dressing plants operated in conjunction with quarries. [2]Includes data for common clay and shale and crude petroleum and natural gas extraction operations, if any. There were 15 such clay and shale mines in 1939 with products valued at $130,000. No oil and gas field operations were reported for 1939. [3]Includes data for 5 limestone quarries operated as part of lime establishments. See also footnote 2. [4]Excludes data for 2 nonproducing establishments. [5]Includes data for 1 cement plant and lime plants producing lime valued at $236,000. [6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry. [7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication. [8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period. [9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments. [10]Includes data for stone quarries operated as part of cement and lime plants. There were 11 such quarries with limestone produced valued at $851,000. [11]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies. [12]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat. [13]Excludes statistics for crushed and broken stone and clay, ceramic, and refractory minerals operations classified in manufactures are included with figure for supplies. [14]Includes data for fuels produced and used at the same establishment for power and heat. [15]Less than one-half of unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Alabama, total		Metal mining			Bituminous coal mining		
		Including operations classified in manufactures	Mineral industries only	Total	Iron ores	Other metal mining	Total	Bituminous coal	Bituminous coal mining contract services
1	Number of operating companies	351	326	26	22	4	194	190	4
2	Number of establishments	413	378	36	32	4	217	213	4
	Number of mines, quarries, and producing oil and gas wells:								
3	1954	474	439	35	32	3	214	214	xxx
4	1939	341	(NA)	38	33	5	...	231	xxx
5	Number of preparation plants	156	153	27	26	1	51	51	xxx
	Value of shipments:[1]								
6	1954.....$1,000	[2]145,888	[2]137,141	[2]46,580	46,204	[2]376	72,407	72,012	395
7	1939.....do	[4]41,852	(NA)	10,106	10,024	82	27,956	27,790	[3]166
8	Value added in mining.....do	[2]100,869	[2]93,638	[2]27,292	27,060	[2]232	54,638	54,328	310
9	Number of persons engaged, total	15,491	14,718	3,898	3,853	45	8,961	8,924	37
10	Production and development workers	13,602	12,880	3,409	3,370	39	7,841	7,812	29
11	All other employees	1,534	1,484	473	470	3	876	876	...
12	Proprietors and firm members	355	354	16	13	3	244	236	8
13	Performing manual labor	219	219	9	7	2	173	169	4
	Man-hours worked by production and development workers:								
14	1954.....1,000	23,526	22,038	6,286	6,212	74	12,342	12,296	46
15	1939.....do	[4]39,827	(NA)	[5]8,825	[5]8,783	42	27,799	27,610	[3]189
	At mines:								
16	Underground.....do	13,537	13,537	3,995	3,969	26	9,209	9,209	...
17	Open-pit.....do	3,467	2,500	614	590	24	704	658	46
18	Surface (mine shops, yards, etc.).....do	[7]1,276	[7]1,110	599	599	...	2,429	2,429	...
19	At preparation plants.....do	[7]4,784	[7]4,429	1,078	1,054	24			...
20	At oil and gas field operations.....do	462	462	xxx	xxx	xxx	xxx	xxx	xxx
21	Man-hours spent on development and exploration work (included above).....do	920	916	99	95	4	36	36	...
22	Principal expenses designated below, total.....$1,000	101,670	97,762	35,602	35,387	215	49,947	49,741	206
23	Wages of production and development workers.....do	46,947	44,782	13,011	12,942	69	26,564	26,443	121
24	Salaries of all other employees.....do	10,370	10,158	3,389	3,377	12	6,149	6,149	...
25	Minerals received for preparation.....do	[8]34,800	33,363	16,888	16,879	...	4,402	4,402	xxx
26	Supplies.....do					9	8,938	8,884	54
	Purchased fuel:								
27	Coal.....do	[8]113	107	92	92	...	...	...	...
28	Fuel oil.....do	[8]570	570	118	103	15	310	285	25
29	Gas.....do	[8]91	91	59	59	...	...	...	...
30	Other fuels.....do	[8]808	804	202	192	10	201	195	6
31	Purchased electric energy.....do	[8]4,203	4,119	1,493	1,490	3	2,031	2,031	...
32	Contract work.....do	[8]3,768	3,768	350	253	97	1,352	1,352	...
33	Purchased machinery installed.....do	[10]8,920	8,862	2,380	2,363	17	5,303	5,303	...
34	Capital expenditures, total.....do	[10]8,256	8,183	2,296	2,287	9	4,768	4,768	...
35	Development and exploration of mineral property.....do	[10]718	708	34	31	3	322	322	...
36	Preparation plant construction.....do	[10]1,170	1,165	70	70	...	1,014	1,014	...
37	Other construction.....do	[10]652	652	27	27	...	581	581	...
38	New machinery and equipment.....do	[10]4,671	4,613	1,973	1,968	5	2,080	2,080	...
39	Used plant and equipment.....do	[10]1,045	1,045	192	191	1	771	771	...
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	[10]429	418	142	139	3	222	221	1
41	Per production worker	32	32	42	41	77	28	28	32
42	Prime movers.....1,000	[10]144	142	37	34	3	63	62	1
43	Electric motors driven by purchased energy.....do	[10]285	276	105	105	(9)	159	159	...
44	Horsepower rating of electric motors driven by energy generated at establishment.....do	[10]79	79	79	79	...	(9)	(9)	...
45	Energy used.....million kwh equivalent	[10]1,261	1,253	442	434	8	520	508	12
	Produced and used for fuel:								
46	Coal.....1,000 short tons	[10]22	22	xxx	xxx	xxx	22	22	...
47	Natural gas.....million cu.ft	[10]53	53	xxx	xxx	xxx	xxx	xxx	xxx
	Purchased fuel:								
48	Coal.....1,000 short tons	[10]18	18	16	16	...	...	...	...
49	Fuel oil.....1,000 barrels	[10]115	115	23	20	3	61	55	6
50	Gas.....million cu.ft	[10]399	399	250	250	...	...	...	...
51	Electric energy purchased.....million kwh	[10]416	409	153	152	1	196	196	...
52	Electric energy generated and used.....do	...	...	...	...	...	...	...	...
53	Water intake, including mine water used.....million gallons	[10]8,179	7,966	3,283	3,283	...	1,845	1,845	...
54	Per production worker.....do	0.60	0.62	0.96	0.97	...	0.24	0.24	...

NA Not available. xxx Not applicable. [1]See table 1, footnote 7. [2]Excludes figures for Uranium-radium-vanadium ores. [3] Represents combined figures for metal mining, coal mining, and nonmetallic minerals (except fuels) mining contract services. [4]See table 1, footnote 1. [5]Figures for 1 nonproducing iron ore mine are included with those for the Crude petroleum and Natural gas industries.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction				Nonmetallic minerals (except fuels) mining									
		Oil and gas field contract services		Total		Dimension stone (including operations classified in manufactures)	Crushed and broken stone (including operations classified in manufactures)	Sand and gravel	Clay, ceramic, and refractory minerals			Nonmetallic minerals (except fuels) contract services, Mica, and Native and asphalt bitumens	
									Total				
Total	Crude petroleum and natural gas	Drilling oil and gas wells	Oil and gas field contract services, n.e.c.	Including operations classified in manufactures	Mineral industries only				Including operations classified in manufactures	Mineral industries only	Fire clay (mineral industries only)		
34	28	3	4	104	79	7	24	28	32	15	7	17	1
35	28	3	4	125	90	7	29	34	37	16	7	18	2
101	101	...	...	124	89	7	29	34	37	16	7	17	3
...	...	xxx	xxx	72	(NA)	4	24	20	21	(NA)	(NA)	3	4
xxx	xxx	xxx	xxx	78	75	3	17	34	8	8	3	16	5
4,850	3,136	178	1,536	22,051	13,304	2,275	11,471	3,583	2,716	1,391	884	2,006	6
...	...	...	...	[4]3,790	(NA)	[4]232	2,370	778	228	(NA)	(NA)	182	7
2,289	1,181	104	1,004	16,650	9,419	1,874	8,528	2,527	2,034	1,079	707	1,687	8
271	126	17	128	2,361	1,588	415	975	477	251	151	72	243	9
213	77	14	122	2,139	1,417	359	935	403	226	126	61	216	10
30	27	...	3	155	105	50	32	47	15	15	5	11	11
28	22	3	3	67	66	6	8	27	10	10	6	16	12
8	3	3	2	29	29	3	1	11	2	2	1	12	13
462	144	28	290	4,436	2,948	763	1,854	943	425	225	106	451	14
[5]35	[5]35	...	...	[4]3,168	(NA)	[4]184	1,890	685	300	(NA)	(NA)	109	15
xxx	xxx	xxx	xxx	333	333	...	243	....	88	88	44	2	16
xxx	xxx	xxx	xxx	2,149	1,182	242	1,057	[6]581	254	54	24	15	17
xxx	xxx	xxx	xxx	677	511	166	93	(NA)	12	12	12	406	18
xxx	xxx	xxx	xxx	1,277	922	355	461	362	71	71	26	28	19
462	144	28	290	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	...	20
374	79	28	267	411	407	4	25	...	...	...	...	382	21
4,094	2,770	110	1,214	12,027	8,119	1,640	6,084	1,803	1,409	724	387	1,091	22
978	318	36	624	6,394	4,229	1,012	2,986	1,039	644	329	182	713	23
171	153	...	18	661	449	212	163	148	80	80	26	58	24
xxx	xxx	xxx	xxx	...	...	...	...	(NA)	...	...	...	...	25
997	546	30	421	[8]3,575	2,138	315	[8]2,235	213		203	152	239	26
...	...	...	...	[8]21	15	6	[8]1	5		...	...	9	27
4	3	1	...	[8]138	138	...	[8]35	92	685	8	1	3	28
1	1	...	...	[8]31	31	...	[8]27	4		...	...	...	29
135	10	7	118	[8]270	266	8	[8]59	130		13	6	60	30
42	42	...	...	[8]637	553	84	[8]404	118		24	13	7	31
1,766	1,697	36	33	[8]300	300	3	[8]174	54		67	7	2	32
126	114	5	7	[10]1,111	1,053	65	[10]290	653		41	18	62	33
510	458	5	47	[10]682	609	80	[10]282	213		44	20	63	34
339	339	...	...	[10]23	13	10	[10]5	1		2	...	5	35
xxx	xxx	xxx	xxx	[10]86	81	5	[10]65	8		6	6	2	36
37	37	...	...	[10]7	7	...	[10]3	4		...	...	...	37
134	82	5	47	[10]484	426	59	[10]208	130		31	10	56	38
...	...	...	...	[10]82	82	6	[10]1	70		5	4	...	39
10	5	...	5	[10]55	44	11	[10]1	32		6	3	5	40
47	65	...	41	26	31	31	xxx	81		48	50	23	41
9	4	...	5	[10]35	33	2	[10]1	24		4	2	4	42
1	1	...	...	[10]20	11	9	(9)	8	(NA)	2	1	1	43
...	...	...	...	...	...	...	...	...		(9)	...	...	44
59	27	2	30	[10]240	232	9	[10]111	85		9	2	26	45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx		xxx	xxx	xxx	46
53	53	...	...	xxx	xxx	xxx	xxx	xxx		xxx	xxx	xxx	47
...	...	...	...	[10]2	2	(9)	(9)	1		...	...	1	48
1	1	(9)	...	[10]30	30	...	[10]8	18		3	(9)	1	49
10	10	...	...	[10]139	139	...	[10]129	10		...	...	...	50
4	4	...	...	[10]63	56	7	[10]43	11		1	1	1	51
...	...	...	...	...	...	...	...	...		...	...	...	52
2	2	...	...	[10]3,049	2,836	213	[10]311	2,518		5	5	2	53
0.01	0.03	...	...	1.43	2.00	0.59	0.33	6.25		0.04	0.08	0.01	54

[6]Includes man-hours worked on floating equipment. [7]For bituminous coal, man-hours at "Surface (including mine shops and yards)" are included with man-hours at "Preparation plant," since approximately 80 percent of the coal shipped was mechanically cleaned. [8]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figures for supplies.
[9]Less than one-half of the unit of measure specified. [10]See table 1, footnote 13.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Alabama, all mineral operations:									
Including operations in manufactures	413	145,888	100,869	13,602	1,534	23,526	46,947	10,370	[2]7,211
Mineral industries only:									
Including crude petroleum and natural gas extraction	378	137,141	93,638	12,880	1,484	22,038	44,782	10,158	7,138
Excluding crude petroleum and natural gas extraction	343	132,291	91,349	12,667	1,454	21,576	43,804	9,987	6,528
Metal mining, total	36	46,580	27,292	3,409	473	6,286	13,011	3,389	2,104
Iron ores	32	46,204	27,060	3,370	470	6,212	12,942	3,377	2,096
Bauxite, Metal mining contract services, and Miscellaneous metal ores	4	376	232	39	3	74	69	12	8
Bituminous coal mining	217	72,407	54,638	7,841	876	12,342	26,564	6,149	3,997
Crude petroleum and natural gas extraction, total	35	4,850	2,289	213	30	462	978	171	510
Crude petroleum and Natural gas[3]	28	3,136	1,181	77	27	144	318	153	458
Oil and gas field contract services[4]	7	1,714	1,108	136	3	318	660	18	52
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	125	22,051	16,650	2,139	155	4,436	6,394	661	[2]600
Mineral industries only	90	13,304	9,419	1,417	105	2,948	4,229	449	527
Dimension stone (including operations in manufactures)	7	2,275	1,874	415	359	763	1,012	212	74
Crushed and broken stone (including operations in manufactures)	29	11,471	8,528	975	935	1,854	2,986	163	[2]281
Sand and gravel	34	3,583	2,527	403	47	943	1,039	148	143
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	37	2,716	2,034	226	15	425	644	80	39
Mineral industries only	16	1,391	1,079	126	15	225	329	80	39
Nonmetallic minerals (except fuels) contract services, Mica, and Native asphalt and bitumens	18	2,006	1,687	216	11	451	713	58	63
COUNTY									
Bibb (Bituminous coal only)	3	259	194	50	3	79	182	6	...
Blount	15	1,423	957	124	12	235	378	83	107
Bituminous coal	11	1,204	771	96	10	172	283	64	90
Butler	4	410	268	37	2	70	89	2	...
Calhoun	3	449	363	86	20	240	268	62	18
Choctaw	9	(NA)	(NA)	[5]50	([5])	(NA)	(NA)	(NA)	(NA)
Dallas	3	575	482	60	11	141	158	37	52
Escambia (mineral industries only)	6	(NA)	(NA)	[5]64	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and Natural gas[6]	3	(NA)	(NA)	[5]31	([5])	(NA)	(NA)	(NA)	(NA)
Franklin (including operations in manufactures)	11	[7]3,400	[7]2,847	331	35	798	1,192	169	453
Jefferson:									
Including operations in manufactures	101	[7]100,936	[7]69,325	9,433	1,225	[7]15,785	[7]33,981	8,939	(NA)
Mineral industries only	88	[7]97,461	[7]66,378	9,308	1,225	[7]15,535	[7]33,501	8,939	[7]4,665
Iron ores	8	41,206	23,013	2,966	452	5,259	11,608	3,277	1,445
Bituminous coal	64	50,313	39,078	5,738	752	9,076	19,782	5,550	3,158
Crushed and broken stone (mineral industries)	6	4,049	2,718	385	17	759	1,389	102	3
Madison (including operations in manufactures)	4	350	258	21	5	52	67	18	[2]98
Marion (Bituminous coal only)	34	2,450	1,528	261	15	390	669	80	16
Montgomery (including operations in manufactures)	7	1,165	769	[5]87	([5])	180	[5]240	([5])	[2]28
Pike	3	292	218	31	...	56	63	...	65
Russell (including operations in manufactures)	5	485	356	[5]42	([5])	101	[5]91	([5])	10

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees		Man-hours worked by production and development workers (1,000)	Wages and salaries		New capital expenditures ($1,000)
				Production and development workers	All other employees		Production and development workers ($1,000)	All other employees ($1,000)	
COUNTY—Continued									
Shelby:									
Including operations in manufactures	24	2,437	1,566	429	8	769	998	21	(NA)
Mineral industries only	20	1,652	1,059	288	8	487	662	21	50
Bituminous coal	14	474	409	130	4	195	257	5	20
Talladega (including operations in manufactures)	8	1,545	1,292	242	28	532	610	111	39
Tuscaloosa (Bituminous coal only)	14	2,659	1,682	293	15	445	1,044	66	142
Walker (mineral industries only)	71	[7]15,659	[7]11,456	1,289	79	[7]2,031	[7]4,425	380	[7]562
Bituminous coal	65	14,484	10,517	1,197	77	1,869	4,119	378	548

D Withheld to avoid approximately disclosing figures for individual companies.

NA Not available.

[1]See table 1, footnote 7.

[2]See table 1, footnote 13.

[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all Oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.

[4]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.

[5]Figures for "All other employees" are included with those for "Production and development workers."

[6]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

[7]Excludes data for 1 Crude petroleum or Natural gas establishment.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	State and county	All mineral operations			Metal mining				Bituminous coal mining		Crude petroleum and natural gas extraction		Nonmetallic minerals (except fuels) mining (Dimension stone)	
		Total	Classified in mineral industries	Included in manufactures	Iron ores	Bauxite	Metal mining contract services	Uranium-radium-vanadium ores	Bituminous coal	Bituminous coal mining contract services	Crude petroleum and Natural gas[1]	Oil and gas field contract services[2]	Limestone (included in manufactures)	Marble (included in manufactures)
1	Alabama, total.....	413	378	35	32	2	1	1	213	4	28	7	1	2
2	Baldwin.....	2	2	...	...	...	...	...	...	...	...		...	...
3	Barbour.....	3	3	...	...	2	1	...	...	...	...		...	...
4	Bibb.....	5	5	...	1	...	...	...	3	1	...		...	...
5	Blount.....	15	15	...	1	...	...	...	11	...	...		...	...
6	Butler.....	4	4	...	4	...	...	...	...	...	...		...	...
7	Calhoun.....	3	3	...	...	...	...	...	...	...	...		...	...
8	Cherokee.....	2	2	...	2	...	...	...	...	...	...		...	...
9	Chilton.....	3	3	...	...	...	...	...	...	...	...		...	...
10	Choctaw.....	9	9	...	...	...	...	...	...	...	9		...	...
11	Clark.....	1	1	...	...	...	...	...	...	...	1		...	...
12	Clay.....	4	4	...	...	...	...	...	...	...	...		...	...
13	Colbert.....	3	3	...	...	...	...	...	...	...	...		...	...
14	Coosa.....	2	2	...	...	...	...	...	...	...	...		...	...
15	Covington.....	1	1	...	...	...	...	...	...	...	1		...	...
16	Crenshaw.....	2	2	...	2	...	...	...	...	...	...		...	...
17	Cullman.....	3	3	...	...	...	...	...	3	...	...		...	...
18	Dallas.....	3	3	...	...	...	...	...	...	...	...		...	...
19	De Kalb.....	2	2	...	...	...	...	...	...	...	...		...	...
20	Elmore.....	3	3	...	...	...	...	...	...	...	...		...	...
21	Escambia.....	7	6	1	...	...	...	...	...	...	3		...	...
22	Etowah.....	2	2	...	...	...	...	...	...	...	...		...	...
23	Fayette.....	1	1	...	...	...	...	...	...	...	1		...	...
24	Franklin.....	11	10	1	8	...	...	...	...	...	1		1	...
25	Greene.....	1	1	...	...	...	...	...	...	...	...	(NA)	...	...
26	Houston.....	2	2	...	1	...	...	...	...	...	...		...	...
27	Jackson.....	2	2	...	...	...	...	...	2	...	...		...	...
28	Jefferson.....	101	88	13	8	...	...	...	64	2	1		...	...
29	Lamar.....	1	1	...	...	...	...	...	...	...	1		...	...
30	Macon.....	2	2	...	...	...	...	...	...	...	...		...	...
31	Madison.....	4	3	1	...	...	...	...	...	...	...		...	...
32	Marengo.....	1	...	1	...	...	...	...	...	...	...		...	...
33	Marion.....	37	37	...	...	...	...	...	34	...	1		...	...
34	Mobile.....	5	3	2	...	...	...	...	...	...	1		...	...
35	Monroe.....	1	1	...	...	...	...	...	...	...	...		...	...
36	Montgomery.....	7	5	2	...	...	...	...	...	...	...		...	...
37	Morgan.....	4	4	...	...	...	...	...	...	...	1		...	...
38	Pickens.....	1	1	...	...	...	...	...	...	...	...		...	...
39	Pike.....	3	3	...	3	...	...	...	...	...	...		...	...
40	Randolph.....	4	4	...	...	...	...	1	...	...	...		...	...
41	Russell.....	5	2	3	...	...	...	...	...	...	...		...	...
42	St. Clair.....	7	3	4	...	...	...	...	2	...	...		...	...
43	Shelby.....	24	20	4	1	...	...	...	14	...	...		...	...
44	Talladega.....	8	6	2	1	...	...	...	...	...	...		...	2
45	Tuscaloosa.....	16	16	...	...	...	...	...	14	...	...		...	...
46	Walker.....	72	71	1	...	...	...	...	65	1	1		...	...
47	Winston.....	1	1	...	...	...	...	...	1	...	...		...	...

NA Not available.
[1]See table 3, footnote 3, and for counties footnote 6.
[2]See table 3, footnote 4.

BY INDUSTRY AND COUNTY: 1954

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued															
Dimension stone—Con.		Crushed and broken stone			Sand and gravel		Clay, ceramic, and refractory minerals					Nonmetallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels)		
		Limestone					Fire clay		Kaolin and ball clay	Clay, ceramic, and refractory minerals, n.e.c.					
Sandstone	Stone, n.e.c.	Classified in mineral industries	Included in manufactures	Sandstone	Common sand and gravel	Foundry sand	Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in manufactures		Mica	Native asphalt and bitumens	
3	1	16	11	2	33	1	7	1	1	8	20	1	16	1	1
...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	2
...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
2	...	...	...	...	...	...	1	...	...	...	...	...	...	...	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	7
...	...	...	...	...	...	. .	...	...	...	...	...	...	...	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	12
...	...	1	...	...	1	...	...	...	...	...	...	...	...	1	13
...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	14
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17
...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	18
1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	19
...	...	...	...	...	2	...	...	...	...	...	...	...	1	...	20
...	...	...	...	...	3	...	...	...	...	...	1	...	...	...	21
...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	22
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	24
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	25
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	26
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27
...	1	5	4	1	1	...	1	...	...	3	9	1	...	...	28
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29
...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	30
...	...	1	...	...	...	...	...	...	...	2	1	...	...	...	31
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	32
...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	33
...	...	...	1	...	2	...	...	...	...	...	1	...	...	...	34
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	35
...	...	...	...	...	5	...	...	...	...	...	2	...	...	...	36
...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	37
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	38
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	39
...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	40
...	...	...	...	...	2	...	...	...	...	...	3	...	...	...	41
...	...	...	1	...	...	...	1	...	...	...	3	...	...	...	42
...	...	4	4	...	...	...	...	...	...	1	...	...	...	...	43
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	44
...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	45
...	...	...	...	...	...	...	3	1	...	1	...	...	...	...	46
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	47

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Alabama, all mineral operations:												
Including operations classified in manufactures	413	48	129	69	69	51	14	17	11	4	1	...
Mineral industries only	378	46	115	63	66	45	13	14	11	4	1	...
Metal mining, total	36	2	5	5	11	4	3	2	2	1	1	...
Iron ores	32	2	4	5	8	4	3	2	2	1	1	...
Bauxite	2	...	...	...	2	...	...	...	...	...	...	...
Metal mining contract services	1	...	...	...	1	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	1	...	1	...	...	...	...	...	...	...	...	...
Bituminous coal mining, total	217	21	71	40	32	27	6	8	9	3	...	...
Bituminous coal	213	21	68	40	32	26	6	8	9	3	...	...
Bituminous coal mining contract services	4	...	3	...	...	1	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	35	15	10	3	5	1	...	1	...	...	...	...
Crude petroleum and Natural gas	28	14	7	2	4	1	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	3	...	2	1	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	4	1	1	...	1	...	...	1	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	125	10	43	21	21	19	5	6	...	...	...	...
Minerals industries only	90	8	29	15	18	13	4	3	...	...	...	...
Dimension stone:												
Limestone (included in manufactures)	1	...	...	...	...	...	...	1	...	...	...	...
Marble (included in manufactures)	2	...	...	...	...	...	...	2	...	...	...	...
Sandstone	3	...	2	1	...	...	...	...	...	...	...	...
Stone, n.e.c	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	16	1	...	3	4	3	3	2	...	...	...	...
Included in manufactures	11	1	1	...	3	5	1	...	...	...	...	...
Sandstone	2	...	...	1	...	1	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	33	...	10	6	11	5	1	...	...	...	...	...
Foundry sand	1	...	...	...	...	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	7	...	3	2	1	1	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	1	...	...	...	...	...	...
Kaolin and ball clay	1	...	...	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	8	1	3	2	1	1	...	...	...	...	...	...
Included in manufactures	20	1	13	6	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	...	...	...	1	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Mica	16	6	10	...	...	...	...	...	...	...	...	...
Native asphalt and bitumens	1	...	...	...	...	1	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Million gallons per production worker[2]	Gallons per dollar value added	Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons): Used	Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Alabama, total	12,880	93,640	5,685	0.44	61	4,402	2,281	14,392	18,683	10	78	10	2
Metal mining, total	3,409	[3]27,294	2,760	0.81	101	1,755	523	2,538	5,208	20	77	2	1
Iron ores	3,370	27,060	2,760	0.82	102	1,755	523	2,538	5,208	20	77	(4)	[5]1
Other metal mining	39	[3]232	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining, total	7,841	54,638	1,495	0.19	27	1,021	350	10,289	9,885	(4)	93	6	1
Bituminous coal	7,812	54,328	1,495	0.19	28	1,021	350	10,289	9,885	(4)	93	6	[5]1
Bituminous coal mining contract services	29	310	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	213	2,289	2	0.01	1	202	xxx	xxx	[6]2	...	...	100	...
Crude petroleum and natural gas	77	1,181	2	0.03	2	202	xxx	xxx	2	...	...	100	...
Oil and gas field contract services:													
Drilling oil and gas wells	14	104	...	...	...	...	xxx	xxx	...	...	...	...	...
Oil and gas field contract services, n.e.c.	122	1,004	...	...	...	...	xxx	xxx	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	1,417	9,419	1,428	1.01	152	1,424	1,408	1,565	3,588	2	65	27	6
Stone (dimension and crushed and broken)	672	4,126	35	0.05	8	35	276	1,565	323	91	9	...	...
Sand and gravel	403	2,527	1,386	3.44	548	1,384	1,132	...	3,258	...	66	28	[5]6
Clay, ceramic, and refractory minerals:													
Fire clay	61	707	5	0.08	7	5	...	...	5	...	...	...	[5]100
Other clay, ceramic, and refractory minerals	65	372	...	...	...	...	...	...	...	...	...	...	...
Other nonmetallic minerals (except fuels) mining	216	1,687	2	0.01	1	2	...	...	2	...	100	...	...

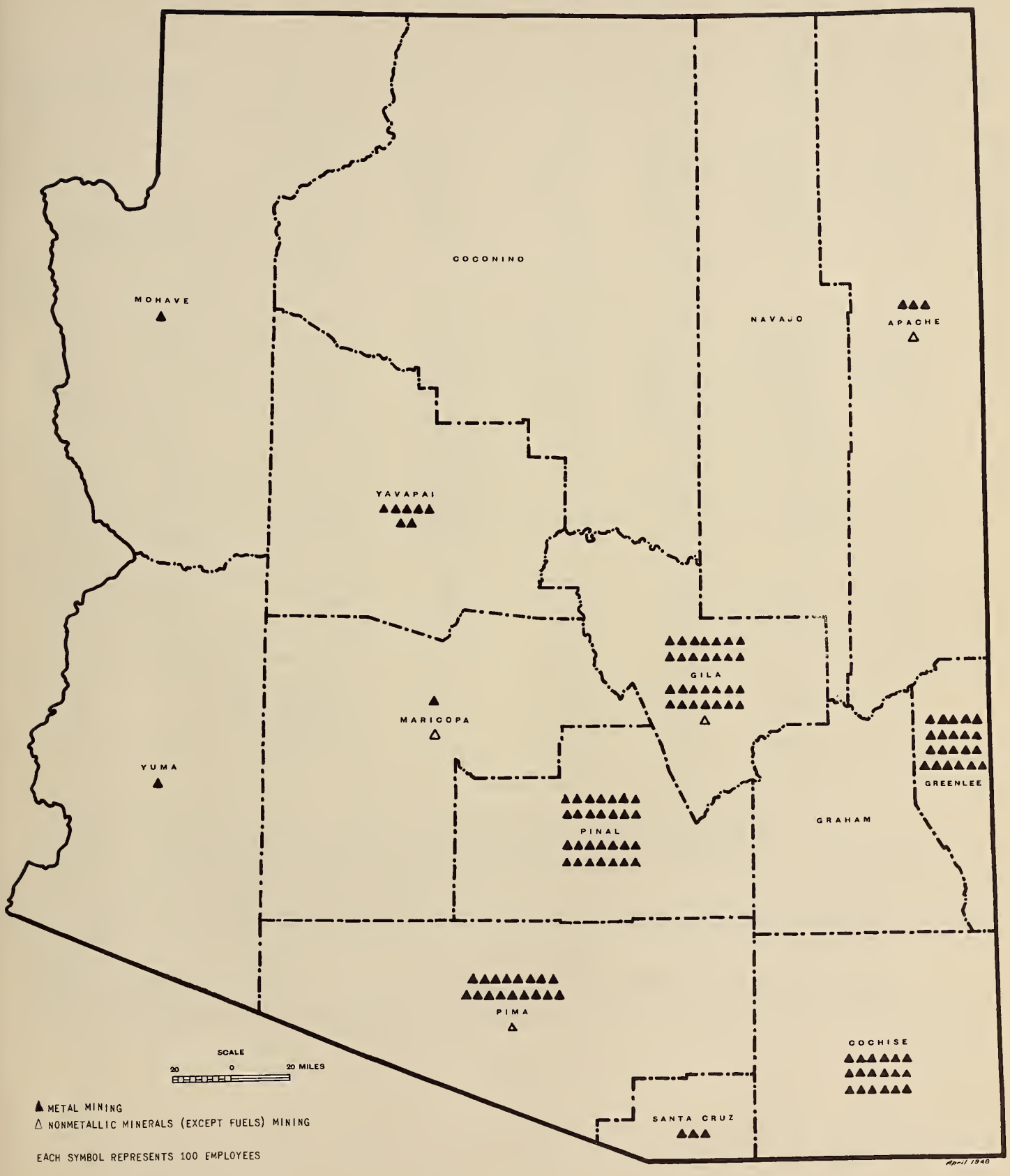
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For computations of water intake per production worker, including mine water used, see table 2.
[3]Excludes figures for the uranium-radium-vanadium ores industry.
[4]Less than 0.5 percent.
[5]Represents "not specified."
[6]Represents water intake only.

ARIZONA

102-1

MINING IN ARIZONA: 1954

Rank among States:
Employment, 17
Value of shipments, 16



VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$13,700
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	7,700



Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	1954	1939[1]	1929[2]	1919[3]	1909[3]	1902[3]
Number of operating companies	455	178	(NA)	(NA)	[4]439	[4]539
Number of establishments	533	(NA)	236	250	445	(NA)
Number of mines and quarries	507	179	244	268	1,147	494
Number of oil and gas wells producing at end of year	...	...	(NA)	...	...	...
Number of preparation plants	120	59	(NA)	(NA)	(NA)	(NA)
Value of shipments[5]....$1,000	[6]219,031	54,230	116,478	88,478	34,218	11,197
Value added in mining....do	[6]179,001	40,560	91,513	64,591	19,531	6,855
Number of persons engaged, total	13,846	10,511	18,943	17,783	16,323	8,400
Production and development workers	11,073	9,400	17,274	16,066	15,146	[7]7,569
All other employees	2,217	989	[8]1,601	1,607	868	831
Proprietors and firm members	556	122	[9]68	110	309	(NA)
Performing manual labor	434	91	(NA)	71	128	(NA)
Man-hours worked by production and development workers....1,000	25,286	22,059		(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000	147,030	30,736	58,479	54,341	32,129	12,901
Wages of production and development workers....do	54,081	14,561	29,209	27,421	15,970	7,389
Salaries of all other employees....do	12,695	2,505	[8]4,305	3,033	1,472	1,170
Minerals received for preparation....do	1,078	(NA)	(NA)	1,528	1,370	
Supplies....do	41,835	10,457	[10]18,003	15,758	6,961	3,985
Purchased fuel....do	4,275	2,024	[10]4,145	4,294	5,946	
Purchased electric energy....do	2,638	1,059	[10]1,561	1,340		
Contract work....do	30,428	130	1,256	967	410	357
Purchased machinery installed....do	9,154		7,404	(NA)		
Capital expenditures, total....do	47,867	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do	11,884		11,612	10,312	(NA)	(NA)
Preparation plant construction....do	10,073	809				
Other construction....do	17,278		(NA)	(NA)		
New machinery and equipment....do	7,022	1,707				
Used plant and equipment....do	1,610	1,462				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	889	282	214	175	56	[9]11
Per production worker	80	30	12	11	4	1
Prime movers....1,000	683	210	163	144	52	[9]11
Electric motors driven by purchased energy....do	206	72	51	31	4	...
Horsepower rating of electric motors driven by energy generated at establishment....do	225	125	169	78	7	[9]1
Energy used....million kwh equivalent	3,747	2,372	3,735	(NA)		
Coal....1,000 short tons	1	5	[9]4	85		
Fuel oils....1,000 barrels	230	559	[9]2,084	1,301	(NA)	(NA)
Gas....million cu.ft	9,184	3,879	...			
Electric energy purchased....million kwh	325	139	[9]132	(NA)		
Electric energy generated and used....do	597	249	[9]452			

NA Not available.

[1]Excludes data for dimension stone dressing plants, if any, operated in conjunction with 3 dimension stone quarries.

[2]Excludes data for establishments, if any, in the Crude petroleum and natural gas extraction industries.

[3]Excludes data for sand and gravel establishments and, except for 1902, for stone quarries operated as part of cement and lime plants, if any. There were 3 such sand and gravel establishments in 1929 with products valued at $82,000, and 2 such stone quarries.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[6]Excludes data for the value of shipment of the Uranium-radium-vanadium ores industry.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees, if any, at central offices not included in reports for mining and mineral preparation establishments.

[9]Represents producing operations only.

[10]Cost of fuels and purchased electric energy for nonproducing establishments are included with cost of supplies. Cost of supplies, fuels, and purchased electric energy for such operations was $568,000.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Arizona, total		Metal mining					
		Including operations classified in manufactures	Mineral industries only	Total	Copper ores	Lead and zinc ores and Gold and silver ores	Ferro-alloy ores, except vanadium: Manganese ores	Ferro-alloy ores, except vanadium: Tungsten ores	Metal mining contract services
1	Number of operating companies	455	447	379	83	86	121	49	4
2	Number of establishments	533	525	435	89	88	141	55	4
	Number of mines, quarries, and producing oil and gas wells:								
3	1954	507	499	428	89	86	139	54	xxx
4	1939	179	(NA)	153	15	[1]127	...	6	...
5	Number of preparation plants	120	119	74	21	21	13	16	xxx
	Value of shipments:[4]								
6	1954.....$1,000	[5]219,031	[5]217,936	[5]213,055	201,691	5,688	4,031	479	1,119
7	1939.....do	[6]54,230	(NA)	53,678	46,383	[7]6,948	...	[7]244	[8]103
8	Value added in mining.....do	[5]179,001	[5]178,139	[5]174,384	165,668	4,543	2,519	581	977
9	Number of persons engaged, total	13,846	13,785	13,196	11,589	571	407	152	79
10	Production and development workers	11,073	11,014	10,529	9,420	404	196	92	75
11	All other employees	2,217	2,217	2,164	2,072	70	5		...
12	Proprietors and firm members	556	554	503	97	97	206	60	4
13	Performing manual labor	434	432	399	77	82	166	52	3
	Man-hours worked by production and development workers:								
14	1954.....1,000	25,286	25,169	24,180	21,852	876	365	209	191
15	1939.....do	[6]22,059	(NA)	21,699	16,263	[10]5,142	...	[7]247	[8]47
	At mines:								
16	Underground.....do	8,021	8,021	7,789	6,610	552	194	126	...
17	Open-pit.....do	6,195	6,078	5,748	5,371	1	92	5	...
18	Surface (mine shops, yards, etc.).....do	7,114	7,114	7,016	6,498	192	31	7	191
19	At preparation plants.....do	3,926	3,926	3,627	3,373	131	48	71	...
20	At oil and gas field operations.....do	30	30	xxx	xxx	xxx	xxx	xxx	xxx
21	Man-hours spent on development and exploration work (included above).....do	2,805	2,805	2,721	2,340	122	...	111	...
22	Principal expenses designated below, total.....$1,000	147,030	146,605	142,984	133,003	3,467	2,291	594	523
23	Wages of production and development workers.....do	54,081	53,889	52,326	48,212	1,583	639	370	381
24	Salaries of all other employees.....do	12,695	12,695	12,459	11,956	392	12		...
25	Minerals received for preparation.....do	1,078	1,078	1,074	39,029	865	361	48	...
26	Supplies.....do	41,835	41,602	40,965				93	60
	Purchased fuel:								
27	Coal.....do	18	18	18	18	...	...	...	...
28	Fuel oil.....do	1,282	1,282	1,204	1,076	64	18	1	20
29	Gas.....do	2,200	2,200	2,197	2,194	...	3	...	...
30	Other fuels.....do	775	775	670	422	38	81	17	47
31	Purchased electric energy.....do	2,638	2,638	2,566	2,390	136	17	8	15
32	Contract work.....do	30,428	30,428	29,505	27,706	389	1,160	57	...
33	Purchased machinery installed.....do	9,154	9,154	8,673	7,571	219	325	114	42
34	Capital expenditures, total.....do	47,867	47,867	46,690	44,383	566	453	440	42
35	Development and exploration of mineral property.....do	11,884	11,884	11,171	10,249	292	144	166	...
36	Preparation plant construction.....do	10,073	10,073	10,035	9,773	20	86	131	...
37	Other construction.....do	17,278	17,278	17,243	17,082	42	4	51	...
38	New machinery and equipment.....do	7,022	7,022	6,766	6,101	177	123	77	30
39	Used plant and equipment.....do	1,610	1,610	1,475	1,178	35	96	15	12
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	889	889	797	734	18	21	7	2
41	Per production worker	80	81	76	78	45	[14]	(D)	32
42	Prime movers.....1,000	683	683	595	540	12	20	6	2
43	Electric motors driven by purchased energy.....do	206	206	202	194	6	1	1	[13]
44	Horsepower rating of electric motors driven by energy generated at establishment.....do	225	225	224	222	1	1	...	...
45	Energy used.....million kwh equivalent	3,747	3,747	3,690	3,564	41	33	5	21
46	Coal.....1,000 short tons	1	1	1	1	...	...	...	...
47	Fuel oil.....1,000 barrels	230	230	218	191	13	4	[13]	4
48	Gas.....million cu.ft	9,184	9,184	9,184	9,173	...	11	...	...
49	Electric energy purchased.....million kwh	325	325	316	301	10	2	1	2
50	Electric energy generated and used.....do	597	597	596	(D)	(D)	1	...	...
51	Water intake, including mine water used.....million gallons	14,714	14,714	14,417	14,155	203	17	28	(D)
52	Per production worker.....do	1.33	1.34	1.37	1.50	0.50	[14]	(D)	(D)

D Withheld to avoid approximately disclosing data for individual companies. NA Not available. [1]Includes data for one nonproducing gold, silver, copper, lead, or zinc ores mine not classified by industry. [2]Represents 1 mercury ores mine and 3 molybdenum ores mines. [3]Represents data for 2 dimension sandstone quarries and one dimension marble quarry. [4]See table 1, footnote 5. [5]See table 1, footnote 6. [6]See table 1, footnote 1. [7]Data for one zinc ores mine, one molybdenum ores mine, one mercury ores mine, and one uranium-radium-vanadium ores mine are included with those for tungsten ores.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Metal mining—Con.		Bituminous coal	Crude petroleum and natural gas extraction and Nonmetallic minerals (except fuels) mining										
Miscellaneous metal ores			Total		Dimension stone		Crushed and broken stone		Sand and gravel	Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Miscellaneous Nonmetallic minerals (except fuels) mining	Other industries	
Uranium-radium-vanadium ores	Mercury ores and Metallic ores, n.e.c.		Including operations classified in manufactures	Mineral industries only	Sandstone (including operations classified in manufactures)	Stone, n.e.c.	Limestone (including operations classified in manufactures)	Granite, marble, and stone, n.e.c.					
42	3	3	73	65	4	6	5	6	17	7	20	22	1
55	3	3	95	87	4	6	5	6	21	7	23	23	2
57	3	3	76	68	4	6	5	6	20	6	23	6	3
1	[24]	2	24	(NA)	[3]3	...	4	2	3	5	...	7	4
...	3	...	46	45	1	...	...	5	18	...	16	6	5
(NA)	47	68	5,908	4,813	477	106	917	140	1,597	871	1,279	521	6
([7])	([7])	([9])	[6] [9]552	(NA)	[3] [6]17	...	225	[9]101	82	[9]64	...	[9]63	7
(NA)	96	59	4,558	3,696	285	103	690	103	1,349	652	1,126	250	8
377	21	22	628	567	41	28	57	20	146	67	181	88	9
} 340	19	{ 21	523	464	31	22	57	15	92	66	168	72	10
		...	53	53	6	...	...	...	29	...	12	6	11
37	2	1	52	50	4	6	...	5	25	1	1	10	12
17	2	1	34	32	4	1	...	2	15	1	7	4	13
646	41	28	1,078	961	65	39	110	26	225	153	312	148	14
([7])	([7])	([9])	[6] [9]360	(NA)	[3] [6]21	...	130	[9]70	34	[9]36	...	[9]69	15
296	11	23	209	209	...	...	...	...	...	...	171	38	16
274	5	...	447	330	16	39	110	13	94	138	24	13	17
76	21	} 5	{ 93	93	49	...	...	...	9	3	13	19	18
...	4		{ 299	299	...	...	...	13	122	12	104	48	19
xxx	xxx	xxx	30	30	xxx	xxx	xxx	xxx	xxx	xxx	xxx	30	20
147	1	...	84	84	...	4	...	...	4	1	35	40	21
3,019	87	36	4,010	3,585	298	78	409	103	790	455	786	1,091	22
} 1,160	80	{ 27	1,728	1,536	90	66	182	64	372	234	455	265	23
		...	236	236	17	...	...	...	143	...	58	18	24
...	...	...	4	4	...	...	...	...	(NA)	...	4	...	25
1,579	4	9	[11]861	628	5	5		19	193		149	187	26
...	...	...	...	...	...	...		...	...		...	...	27
24	1	...	[11]78	78	...	...		4	16		26	1	28
...	...	...	[11]3	3	...	...	227	...	...	221	...	3	29
64	1	...	[11]105	105	10	5		11	35		32	12	30
...	...	...	[11]72	72	1	...		3	31		7	20	31
192	1	...	[11]923	923	175	2		2	...		55	585	32
388	14	...	[12]481	481	9	7		39	163		134	124	33
736	70	...	[12]1,177	1,177	8	16		41	190		254	661	34
304	16	...	[12]713	713	1	8		2	10		91	600	35
...	25	...	[12]38	38	...	...		...	5		12	21	36
46	18	...	[12]35	35	...	1		...	19		11	4	37
247	11	...	[12]256	256	7	...		...	104		105	34	38
139	...	...	[12]135	135	...	7		39	52		35	2	39
15	([13])	([13])	[12]92	92	1	1		2	16		8	2	40
(D)	xxx	xxx	176	198	34	45		160	177		48	28	41
15	([13])	...	[12]88	88	1	1		2	14		7	2	42
([13])	...	([13])	[12]4	4	([13])	([13])	(NA)	([13])	2	(NA)	1	...	43
([13])	([13])	...	[12]1	1	...	...		...	...		...	1	44
24	2	...	[12]57	57	3	1		7	16		18	4	45
...	...	...	...	...	...	...		...	...		...	...	46
5	1	...	[12]12	12	...	...		1	3		5	([13])	47
...	...	...	([13])	([13])	...	...		...	...		...	([13])	48
...	...	...	[12]9	9	([13])	...		([13])	2		1	2	49
...	...	...	[12]1	1	...	...		1	...		...	...	50
11	(D)	...	[12]297	297	...	...		...	226		1	70	51
(D)	(D)	...	0.57	0.64	...	...		...	2.46		0.01	0.97	52

[8]Includes data for nonmetallic minerals (except fuels) contract services, if any. [9]Figures for 2 bituminous coal mines, one feldspar mine, and one fluorspar mine are included with those for crushed and broken stone, n.e.c. [10]Includes data for 2 nonproducing molybdenum ores mines. See also footnotes 1 and 7. [11]Figures for cost of fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figures for supplies. [12]Excludes data for crushed stone and clay operations classified in manufactures. [13]Less than one-half of the unit of measure specified. [14]Not shown since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Arizona, all mineral operations:									
Including operations in manufactures	533	[1]219,031	[1]179,001	11,073	2,217	25,286	54,081	12,695	[2]46,257
Mineral industries only	525	[1]217,936	[1]178,139	11,014	2,217	25,169	53,889	12,695	46,257
Metal mining, total	435	[1]213,055	[1]174,384	10,529	2,164	24,180	52,326	12,459	45,215
Copper ores	89	201,691	165,668	9,420	2,072	21,852	48,212	11,956	43,205
Lead and zinc ores and Gold and silver ores	88	5,688	4,543	404	70	876	1,583	392	531
Ferro-alloy ores, except vanadium	196	4,510	3,100	286	7	574	1,002	19	782
Metal mining contract services	4	1,119	977	75	...	191	381	...	30
Miscellaneous metal ores	58	[1]47	[1]96	344	15	687	1,148	92	667
Bituminous coal mining	3	68	59	21	...	28	27	...	...
Crude petroleum and natural gas extraction and Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	95	5,908	4,558	523	53	1,078	1,728	236	[2]1,042
Mineral industries only	87	4,813	3,696	464	53	961	1,536	236	1,042
Dimension stone (including operations in manufactures)	10	583	388	53	6	104	156	17	17
Crushed and broken stone (including operations in manufactures)	11	1,057	793	72	...	136	246	...	[2]4
Sand and gravel	21	1,597	1,349	92	29	225	372	143	138
Clay, ceramic, and refractory minerals (including operations in manufactures)	7	871	652	66	...	153	234	...	[2]5
Miscellaneous nonmetallic minerals (except fuels) mining	23	1,279	1,126	168	12	312	455	58	219
Crude petroleum and natural gas, Oil and gas field contract services, Chemical and fertilizer mineral mining, and Nonmetallic minerals (except fuels) contract services[3]	23	521	250	72	6	148	265	18	659
COUNTY									
Apache	18	(NA)	(NA)	301	14	629	1,036	60	352
Cochise (mineral industries only)	29	(D)	(D)	1,582	234	(D)	(D)	(D)	(D)
Coconino, total	39	[1]258	[1]210	66	6	123	212	39	210
Metal mining	28	[1]52	[1]43	33	5	65	123	37	199
Nonmetallic minerals (except fuels) mining	11	206	167	33	1	58	89	2	11
Dimension stone	6	123	110	29	1	51	78	2	9
Gila, total	61	[1]35,892	[1]33,771	2,129	853	4,326	9,987	4,837	7,646
Metal mining	51	[1]34,968	[1]32,897	1,999	845	4,079	9,642	4,790	7,484
Miscellaneous nonmetallic minerals (except fuels)	10	924	874	130	8	247	345	47	162
Graham	9	[1]371	[1]285	37	8	73	117	31	27
Greenlee	8	(D)	(D)	1,821	247	(D)	(D)	(D)	(D)
Maricopa, total:									
Including operations in manufactures	47	[1]2,355	[1]1,894	157	17	364	634	84	[2]234
Mineral industries only	44	[1]2,165	[1]1,714	150	17	351	614	84	234
Metal mining	28	[1]671	[1]504	55	1	114	227	2	150
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	19	1,684	1,390	102	16	250	407	82	[2]84
Mineral industries only	16	1,494	1,210	95	16	237	387	82	84
Mohave	47	[1]842	[1]647	70	4	128	217	13	274
Ferro-alloy ores, except vanadium	26	577	390	37	2	74	138	7	161
Navajo	13	[1]99	[1]38	37	...	40	52	...	56
Pima (including operations in manufactures)	52	42,872	34,305	1,541	299	3,716	7,900	1,754	3,764
Pinal	39	(D)	(D)	2,483	379	(D)	(D)	(D)	(D)
Santa Cruz	26	1,142	955	175	17	398	567	93	79
Yavapai (mineral industries only), total	73	11,352	9,600	561	139	1,416	2,445	697	1,427
Metal mining	67	10,739	9,199	528	133	1,342	2,316	679	1,420
Nonmetallic minerals (except fuels) mining (mineral industries only)	6	613	401	33	6	74	129	18	7
Yuma	55	[1]2,696	[1]1,772	102	...	239	420	1	154

D Withheld to avoid approximately disclosing data for individual companies. NA Not available. [1]See table 1, footnote 6. [2]See table 2, foo
note 12. [3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each St
The only data requested by county in these reports were number of employees on March 15, 1954, and quantity of crude petroleum produced. However, for a f
reports indicating that all operations were in one county all data reported were included with the figures for the specified county. On the other hand, s
eral reports showed all labor performed by contractors or proprietors and did not indicate the county in which operated; such reports were not allocated t
specific counties. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of
establishments in a county represents the number of reports that specified any operations in that county.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Arizona, total	Apache	Cochise	Coconino	Gila	Graham	Greenlee
All mineral operations, total	533	18	31	39	61	9	8
Classified in mineral industries	525	18	29	39	61	9	8
Included in manufactures	8	...	2	...	...	...	...
Metal mining:							
Copper ores	89	...	9	4	9	...	2
Lead and zinc ores	41	1	7	1	2	2	...
Gold and silver ores:							
Lode gold	30	...	1	1	2	...	...
Placer gold	2	...	...	...	...	...	...
Silver ores	15	...	1	...	1	...	1
Ferro-alloy ores, except vanadium:							
Manganese ores	141	...	...	4	26	3	4
Tungsten ores	55	...	9	...	1	...	...
Metal mining contract services	4	...	...	...	...	...	...
Miscellaneous metal ores:							
Mercury ores	2	...	...	...	1	...	...
Uranium-radium-vanadium ores	55	13	...	18	9	1	...
Metallic ores, n.e.c	1	...	...	...	...	...	...
Bituminous coal	3	1	...	...	...	...	...
Crude petroleum and natural gas extraction:							
Crude petroleum and natural gas[1]	15	2	...	...	...	...	...
Oil and gas field contract services[1]	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:							
Dimension stone:							
Sandstone:							
Classified in mineral industries	3	...	...	1	...	...	...
Included in manufactures	1	...	...	...	...	...	...
Stone, n.e.c	6	...	...	5	...	...	...
Crushed and broken stone:							
Limestone:							
Classified in mineral industries	1	...	...	...	...	...	...
Included in manufactures[2]	4	...	2	...	...	...	...
Granite	3	...	...	...	...	...	...
Marble	1	...	1	...	...	...	...
Stone, n.e.c	2	...	...	1	...	...	...
Sand and gravel	21	...	...	1	...	...	1
Clay, ceramic, and refractory minerals:							
Bentonite	2	1	...	...	...	...	...
Feldspar	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c:							
Classified in mineral industries	1	...	...	...	...	...	...
Included in manufactures	3	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c	2	...	1	...	...	...	...
Chemical and fertilizer mineral mining:							
Barite	1	...	...	...	...	...	...
Fluorspar	1	...	...	...	...	1	...
Chemical and fertilizer mineral mining, n.e.c	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	1	...	...	...
Miscellaneous nonmetallic minerals (except fuels):							
Gypsum	3	...	...	...	...	...	...
Mica	2	...	...	...	...	...	...
Pumice and pumicite	4	...	...	2	...	1	...
Nonmetallic minerals, n.e.c	14	...	...	...	10	1	...

See footnotes at end of table.

Table 4.--NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954--Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
All mineral operations, total	47	47	13	52	39	26	75	55
Classified in mineral industries	44	47	13	51	39	26	73	55
Included in manufactures	3	...	...	1	...	...	2	...
Metal mining:								
Copper ores	2	4	...	12	16	12	14	5
Lead and zinc ores	...	3	...	4	4	9	8	...
Gold and silver ores:								
Lode gold	...	2	...	1	4	...	17	2
Placer gold	...	...	...	...	...	...	1	1
Silver ores	...	4	...	2	1	...	5	...
Ferro-alloy ores, except vanadium:								
Manganese ores	23	19	...	5	5	4	14	34
Tungsten ores	1	7	...	20	3	...	6	8
Metal mining contract services	...	...	1	...	1	...	1	1
Miscellaneous metal ores:								
Mercury ores	1	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	1	3	7	1	...	1	...	1
Metallic ores, n.e.c	...	...	...	...	...	...	1	...
Bituminous coal	...	...	2	...	...	...	...	...
Crude petroleum and natural gas extraction:								
Crude petroleum and natural gas[1]	...	...	1	...	...	...	...	1
Oil and gas field contract services[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:								
Dimension stone:								
Sandstone:								
Classified in mineral industries	...	...	...	...	...	...	2	...
Included in manufactures	...	...	...	...	...	...	1	...
Stone, n.e.c	...	...	...	...	...	...	1	...
Crushed and broken stone:								
Limestone:								
Classified in mineral industries	1	...	...	...	...	...	...	...
Included in manufactures[2]	...	...	...	1	...	...	1	...
Granite	2	...	...	...	...	...	1	...
Marble	...	...	...	...	...	...	...	...
Stone, n.e.c	1	...	...	...	...	...	...	...
Sand and gravel	10	1	1	5	...	...	...	2
Clay, ceramic, and refractory minerals:								
Bentonite	...	1	...	...	...	...	...	...
Feldspar	...	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:								
Classified in mineral industries	...	...	1	...	...	...	...	...
Included in manufactures	3	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c	...	...	...	1	...	...	...	...
Chemical and fertilizer mineral mining:								
Barite	1	...	...	...	...	...	...	...
Fluorspar	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	...	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):								
Gypsum	...	...	...	...	2	...	1	...
Mica	1	1	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	1	...
Nonmetallic minerals, n.e.c	...	...	...	...	3	...	...	...

[1]See table 3, footnote 3.

[2]Includes one quarry operated as part of an establishment classified in wholesale trade.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Arizona, all mineral operations:												
Including operations classified in manufactures	533	226	157	42	31	16	3	7	2	3	6	...
Mineral industries only	525	265	154	41	29	15	3	7	2	3	6	...
Metal mining, total	435	244	123	22	18	8	2	7	2	3	6	...
Copper ores	89	44	20	4	5	1	...	4	2	3	6	...
Lead and zinc ores:												
Lead ores	12	8	4	...	...	...	...	...	...	...	...	...
Zinc ores	1	...	...	...	1	...	...	...	...	...	...	...
Lead-zinc ores:												
Valued chiefly for lead	22	11	8	...	1	2	...	...	...	...	...	...
Valued chiefly for zinc	6	3	...	...	1	...	...	2	...	...	...	...
Gold and silver ores:												
Lode gold	30	15	15	...	...	...	...	...	...	...	...	...
Placer gold	2	1	1	...	...	...	...	...	...	...	...	...
Silver ores	15	11	3	...	1	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Manganese ores	141	95	34	8	3	1	...	...	...	...	...	...
Tungsten ores	55	37	12	4	1	1	...	...	...	...	...	...
Metal mining contract services	4	...	2	...	1	...	1	...	...	...	...	...
Miscellaneous metal ores:												
Mercury ores	2	...	...	1	1	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	55	19	23	5	3	3	1	1	...	...	...	...
Metallic ores, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...
Bituminous coal	3	...	1	1	1	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	17	11	4	1	1	...	...	...	...	...	...	...
Crude petroleum and natural gas	15	11	3	1	...	...	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	1	...	1	...	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c.	1	...	...	...	1	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	78	11	29	18	11	8	1	...	...	...	...	...
Mineral industries only	70	10	26	17	9	7	1	...	...	...	...	...
Dimension stone:												
Sandstone:												
Classified in mineral industries	3	...	...	1	2	...	...	...	...	...	...	...
Included in manufactures	1	1	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c. (classified in mineral industries)	6	...	4	2	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	1	...	...	1	...	...	...	...	...	...	...	...
Included in manufactures[1]	4	...	1	...	2	1	...	...	...	...	...	...
Granite	3	...	1	2	...	...	...	...	...	...	...	...
Marble	1	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	2	2	...	...	...	...	...	...	...	...	...	...
Sand and gravel	21	3	9	4	2	3	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	2	...	1	...	...	...	1	...	...	...	...	...
Feldspar	1	...	...	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	1	1	...	...	...	...	...	...	...	...	...	...
Included in manufactures	3	...	2	1	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	2	...	1	...	1	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Barite	1	...	...	...	...	1	...	...	...	...	...	...
Fluorspar	1	1	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	1	...	...	...	1	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	1	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum	3	...	2	1	...	...	...	...	...	...	...	...
Mica	2	...	...	2	...	...	...	...	...	...	...	...
Pumice and pumicite	4	2	2	...	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c.	14	1	4	3	3	3	...	...	...	...	...	...

[1]See table 4, footnote 2.

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

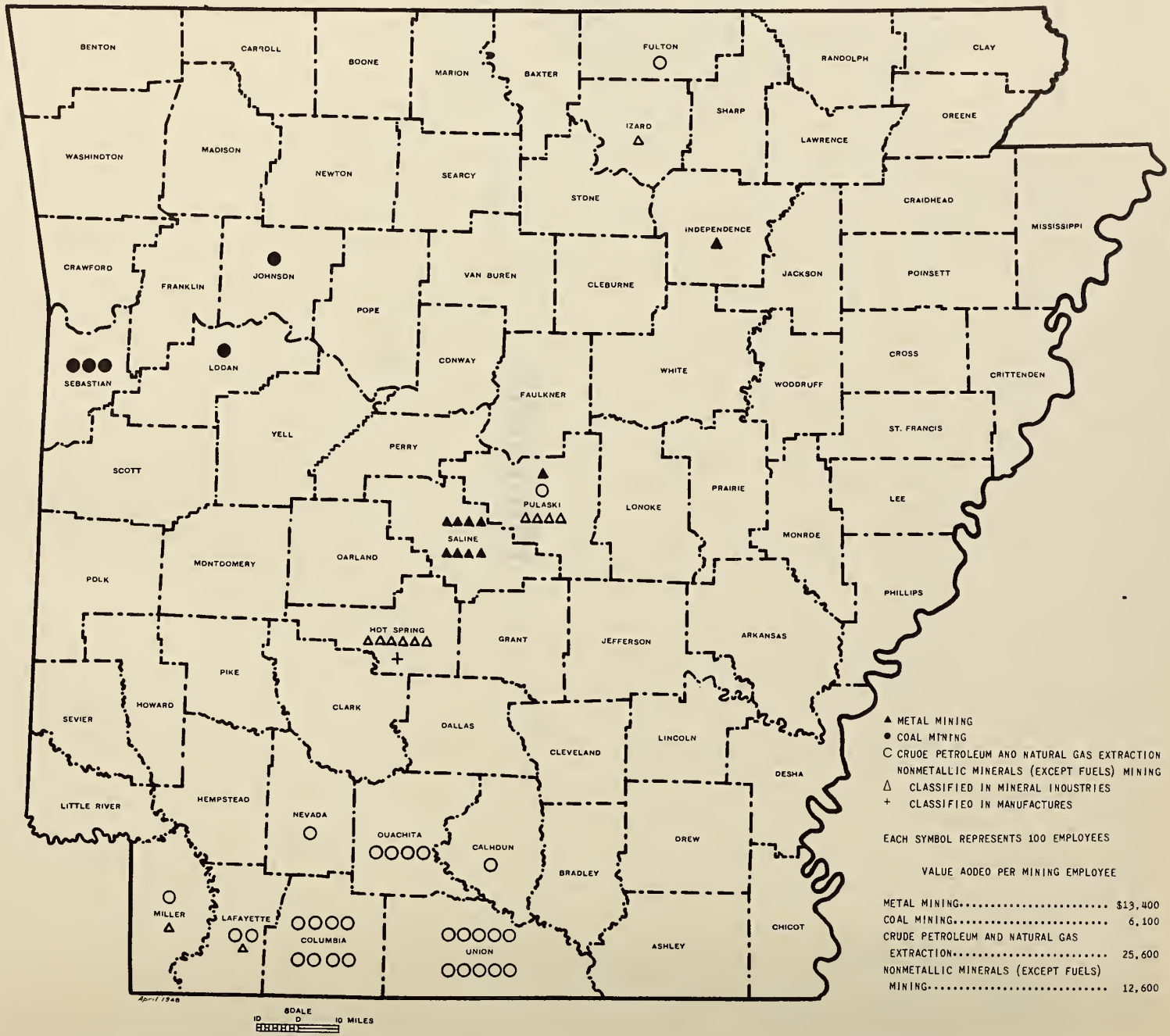
Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Arizona, total	11,014	[2]178,139	13,715	1.25	77	10,648	999	4,422	23,458	27	3	47	23
Metal mining, total	10,529	[2]174,384	13,441	1.28	77	10,414	976	4,422	23,139	26	3	48	23
Copper ores	9,420	165,668	13,231	1.41	80	10,232	924	4,329	22,795	26	3	47	24
Lead and zinc ores and Gold and silver ores	404	4,543	155	0.38	34	135	48	69	267	...	...	100	...
Ferro-alloy ores, except vanadium:													
Manganese ores	196	2,519	17	([3])	7	14	...	...	32	...	24	76	...
Tungsten ores	(D)	581	24	(D)	41	24	4	24	34	...	8	50	[4]42
Metal mining contract services	75	977	(D)	(D)	(D)	(D)	...	...	...	...	...	100	...
Miscellaneous metal ores:													
Uranium-radium-vanadium ores	(D)	(NA)	11	(D)	(NA)	9	...	...	11	...	...	100	...
Mercury ores and Metallic ores, n.e.c	(D)	96	(D)	(D)	(D)	(D)	...	...	...	...	...	100	...
Bituminous coal	21	59	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction and Nonmetallic minerals (except fuels) mining, total	464	3,696	274	0.59	74	234	23	...	319	74	...	26	...
Stone and clay	132	971	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	92	1,349	203	2.21	150	203	23	...	226	100	...	...	...
Other industries	72	250	70	0.97	280	30	...	...	93	...	...	100	...

D Withheld to avoid approximately disclosing figures for individual companies.
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]See table 1, footnote 6.
[3]See table 2, footnote 14.
[4]Represents "not specified."

ARKANSAS

MINING IN ARKANSAS: 1954

Rank among States:
Employment, 26
Value of shipments, 21



VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$13,400
COAL MINING	6,100
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	25,600
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	12,600

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	1954	1939[1]	1929[2]	1919[3]	1909[3]	1902[4]
Number of operating companies	395	286	(NA)	(NA)	[5]105	[5]134
Number of establishments	423	(NA)	128	126	121	(NA)
Number of mines and quarries	142	142	137	126	156	126
Number of oil and gas wells producing at end of year	3,681	2,987	(NA)	124	62	...
Number of preparation plants	71	...	(NA)	(NA)	(NA)	(NA)
Value of shipments[6]...$1,000	138,879	31,348	11,368	8,405	4,604	2,840
Value added in mining...do	110,107	22,150	9,558	6,423	3,973	2,591
Number of persons engaged, total	6,533	7,648	5,453	4,073	5,269	3,156
Production and development workers	5,206	6,926	5,030	3,630	4,941	[7]2,945
All other employees	925	551	[8]351	334	242	211
Proprietors and firm members	402	171	72	109	86	(NA)
Performing manual labor	170	61	(NA)	68	44	(NA)
Man-hours worked by production and development workers...1,000	10,425	10,737	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	58,303	17,932	7,536	7,157	3,901	2,388
Wages of production and development workers...do	17,995	7,446	4,917	4,573	3,031	1,946
Salaries of all other employees...do	4,982	1,288	[8]809	602	239	193
Minerals received for preparation...do	2,085	(NA)	(NA)	[9]166	...	(NA)
Supplies...do	17,394	2,792	1,089	1,236	371	
Fuel[10]...do	1,645	874	276	330	139	244
Purchased electric energy...do	1,347	374	338	111		
Contract work...do	12,855	5,158	107	139	121	5
Purchased machinery installed...do	7,139		619	(NA)		
Capital expenditures, total...do	13,690	(NA)	(NA)	(NA)		
Development and exploration of mineral property...do	5,382		220	432	(NA)	(NA)
Preparation plant construction...do	593	149				
Other construction...do	424		(NA)	(NA)		
New machinery and equipment...do	5,920	3,779				
Used plant and equipment...do	1,371	381				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	359	142	38	21	14	7
Per production worker	69	20	8	6	3	2
Prime movers...1,000	283	109	15	15	14	7
Electric motors driven by purchased energy...do	76	33	23	6	([11])	...
Horsepower rating of electric motors driven by energy generated at establishment...do	...	...	...	3	2	1
Energy used...million kwh equivalent	3,793	3,306	504	(NA)		
Coal[12]...1,000 short tons	2	15	34	74		
Fuel oils[12]...1,000 barrels	85	27	36	1		
Gas[12]...million cu.ft	10,803	10,085	542	328	(NA)	(NA)
Electric energy purchased...million kwh	126	26	15	(NA)		
Electric energy generated and used...do	1	([11])	...	(NA)		

NA Not available.

[1]Includes data for one or two establishments engaged primarily in oil and field hauling. Such operations were not classified in the mineral industries for 1954.

[2]Excludes data for the crude petroleum and natural gas extraction and common clay and shale industries. There were 10 such clay and shale mines in 1939 with products valued at $80,000.

[3]Excludes data for sand, gravel, common clay, and shale operations, and limestone quarries operated as part of cement and lime plants. There were 25 such sand, gravel, common clay and shale mines in 1939 with products valued at $695,000. Also, for 1919, excludes data for 2 nonproducing establishments.

[4]Includes data for lime plants producing lime valued at $83,000.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Represents cost of gas purchased for resale.

[10]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[11]Less than one-half of the unit of measure specified.

[12]Includes data for fuels produced and used at the same establishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Arkansas, total		Metal mining and Bituminous coal mining					Crude petroleum and natural gas extraction	
		Including operations classified in manufactures	Mineral industries only	Total	Bauxite	Manganese ores	Bituminous coal	Other metal mining and Bituminous coal contract services	Total	Crude petroleum
1	Number of operating companies	395	383	70	10	17	33	10	257	194
2	Number of establishments	423	410	79	17	19	33	10	268	198
	Number of mines, quarries, and producing oil and gas wells:									
3	1954	3,823	3,810	69	13	19	33	4	3,681	3,487
4	1939	3,129	(NA)	98	9	2	78	9	2,987	(NA)
5	Number of preparation plants	71	69	19	7	12	...	...	9	xxx
	Value of shipments:[1]									
6	1954 ..... $1,000	[2]138,879	[2]136,241	[2]22,243	15,889	1,017	3,692	[2]1,645	86,130	72,769
7	1939 ..... do	[3]31,348	(NA)	6,320	2,442	[4]159	3,656	[4]63	[3]23,941	[5]17,020
8	Value added in mining ..... do	[2]110,107	[2]107,904	[2]17,431	12,383	881	2,783	[2]1,384	[6]70,085	60,398
9	Number of persons engaged, total	6,533	6,311	1,622	807	167	503	145	3,023	1,860
10	Production and development workers	5,206	4,985	1,327	624	144	430	129	2,173	1,168
11	All other employees	925	925	222	182	1	27	12	566	483
12	Proprietors and firm members	402	401	73	1	22	46	4	284	209
13	Performing manual labor	170	169	60	...	16	41	3	87	63
	Man-hours worked by production and development workers:									
14	1954 1,000	10,425	9,986	2,461	1,221	217	668	355	4,204	2,308
15	1939 ..... do	[3]10,737	(NA)	4,584	[7]1,131	[4]248	3,099	[4] [7]106	[3]5,219	[5]3,276
	At mines:									
16	Underground ..... do	1,189	1,189	730	281	12	433	4	xxx	xxx
17	Open-pit ..... do	2,399	1,970	724	177	139	116	292	xxx	xxx
18	Surface (mine shops, yards, etc.) ..... do	842	842	757	582	10	119	46	xxx	xxx
19	At preparation plants ..... do	2,239	2,229	250	181	56	...	13	448	xxx
20	At oil and gas field operations ..... do	3,756	3,756	xxx	xxx	xxx	xxx	xxx	3,756	2,308
21	Man-hours spent on development and exploration work (included above) ..... do	1,493	1,493	28	...	14	...	14	978	277
22	Principal expenses designated below, total $1,000	58,303	57,374	10,816	6,929	494	2,483	910	[6]33,860	25,916
23	Wages of production and development workers ..... do	17,995	17,501	4,865	2,463	241	1,564	597	7,782	4,446
24	Salaries of all other employees ..... do	4,982	4,982	1,171	1,009	2	119	41	3,178	2,738
25	Minerals received for preparation ..... do	2,085	2,085	946	932	14	...	...	[6]10,972	xxx
26	Supplies ..... do	[9]17,394	16,962	1,687	776	88	644	179		7,813
	Purchased fuel:									
27	Coal ..... do	[9]1	1	...	...	...	...	...	...	...
28	Fuel oil ..... do	[9]443	442	162	48	19	22	73	81	26
29	Gas ..... do	[9]457	457	80	80	([11])	...	...	217	208
30	Other fuels ..... do	[9]744	743	139	81	21	21	16	459	168
31	Purchased electric energy ..... do	[9]1,347	1,346	227	129	([11])	96	2	574	491
32	Contract work ..... do	[9]12,855	12,855	1,538	1,411	108	17	2	10,597	10,026
33	Purchased machinery installed ..... do	[10]7,139	7,139	859	334	240	190	95	4,502	3,461
34	Capital expenditures, total ..... do	[10]13,690	13,690	824	285	355	81	103	11,357	9,822
35	Development and exploration of mineral property ..... do	[10]5,382	5,382	64	6	54	3	1	5,313	5,009
36	Preparation plant construction ..... do	[10]593	593	103	...	96	7	...	72	xxx
37	Other construction ..... do	[10]424	424	18	11	4	3	...	372	372
38	New machinery and equipment ..... do	[10]5,920	5,920	501	265	104	32	100	4,434	3,470
39	Used plant and equipment ..... do	[10]1,371	1,371	138	3	97	36	2	1,166	971
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[10]359	359	85	47	5	21	12	200	112
41	Per production worker	69	69	64	75	36	48	9	92	96
42	Prime movers 1,000	[10]283	283	60	29	5	14	12	181	96
43	Electric motors driven by purchased energy ..... do	[10]76	76	25	18	([11])	7	([11])	19	16
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	...	...	...	...	...	...	...	...	...
45	Energy used ..... million kwh equivalent	[10]3,793	3,793	220	157	8	28	27	3,183	1,427
	Produced and used for fuel:									
46	Coal ..... 1,000 short tons	1	1	1	xxx	xxx	1	xxx	xxx	xxx
47	Crude petroleum ..... 1,000 barrels	10	10	xxx	xxx	xxx	xxx	xxx	10	10
48	Natural gas ..... million cu. ft.	6,592	6,592	xxx	xxx	xxx	xxx	xxx	6,592	1,282
	Purchased fuel:									
49	Coal ..... 1,000 short tons	[10]1	1	...	...	...	...	...	...	...
50	Fuel oil ..... 1,000 barrels	[10]75	75	29	9	2	4	14	16	5
51	Gas ..... million cu.ft.	[10]4,211	4,211	370	370	...	...	...	3,056	2,983
52	Electric energy purchased ..... million kwh	[10]126	126	16	8	([11])	8	([11])	56	47
53	Electric energy generated and used ..... do	[10]1	1	...	...	...	...	...	1	...
54	Water intake, including mine water used ..... million gallons	[10]4,329	4,329	346	179	158	9	...	1,641	734
55	Per production worker ..... do	0.83	0.87	0.26	0.29	1.10	0.02	...	0.76	0.63

NA Not available. xxx Not applicable. [1]See table 1, footnote 6. [2]Excludes data for Uranium-radium-vanadium ores. Value of shipments and cost of minerals received for preparation were not obtained for this industry. [3]See table 1, footnote 1. [4]Figures for 1 titanium ores mine and 1 mill are included with those for manganese ores. [5]Figures for the Natural gas industry are included with those for the Crude petroleum industry. [6]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable re-

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for esch yesr, see INTRODUCTION)

Crude petroleum and natural gas extraction—Con.					Nonmetallic minerals (except fuels) mining									
		Oil snd gas field contract services			Total		Dimension stone		Crushed and broken stone					
Nstural gas	Natural gas liquids	Drilling oil and gas wells	Building, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Including operstions classified in manufsctures	Mineral industries only	All stone (including operstions clsssified in manufactures)	Sandstone	All stone (including operstions classified in manufactures)	Limestone (mineral industries only)	Sand and grsvel	Clsy, ceramic, and refractory minerals (including operations classified in manufactures)	Other nonmetallic minerals (except fuels) mining	
6	9	18	3	34	69	57	15	7	11	6	25	11	10	1
6	9	18	3	34	76	63	15	7	12	6	27	11	11	2
142	...	36	...	16	73	60	15	7	12	6	27	11	8	3
xxx	(NA)	(NA)	(NA)	(NA)	44	(NA)	4	...	11	(NA)	15	10	4	4
xxx	9	xxx	xxx	xxx	43	41	2	...	9	5	22	2	8	5
972	5,811	3,280	75	3,223	30,506	27,868	418	226	9,812	794	4,605	2,017	13,654	6
(5)	940	5,617	63	[3]301	1,087	(NA)	29	...	326	(NA)	616	79	37	7
796	(6)	2,301	60	2,523	22,591	20,388	303	147	6,502	574	3,139	1,562	11,085	8
63	262	289	18	531	1,888	1,666	104	66	540	103	451	178	615	9
52	210	249	14	480	1,706	1,485	87	57	486	83	405	178	550	10
6	48	13	...	16	137	137	5	5	52	18	22	...	58	11
5	4	27	4	35	45	44	12	4	2	2	24	...	7	12
1	2	9	3	9	23	22	10	3	...	...	11	...	2	13
122	448	452	8	866	3,760	3,321	160	103	1,099	160	910	352	1,239	14
(5)	184	1,582	16	[3]161	934	(NA)	45	...	255	(NA)	537	63	34	15
xxx	xxx	xxx	xxx	xxx	459	459	...	...	...	...	30	...	429	16
xxx	xxx	xxx	xxx	xxx	1,675	1,246	122	75	614	101	[8]418	331	190	17
xxx	xxx	xxx	xxx	xxx	85	85	28	28	57	11	(NA)	...	...	18
xxx	448	xxx	xxx	xxx	1,541	1,531	10	...	428	48	462	21	620	19
122	xxx	452	8	866	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
36	xxx	446	8	211	487	487	...	...	485	12	1	...	1	21
632	[6]1,949	2,102	40	2,082	13,627	12,698	308	207	5,121	401	2,680	887	4,631	22
227	977	857	25	1,250	5,348	4,854	166	101	1,592	222	1,146	432	2,012	23
24	273	68	...	75	633	633	19	19	222	54	111	...	281	24
xxx	[6]561	xxx	xxx	xxx	...	...	...	...	...	...	...	...	...	25
172		774	15	498	[9]5,874	5,442	96	72	[9]2,929	72	1,083	[9]322	1,444	26
...	...	...	...	...	1	1	1	1	...	...	...	...	...	27
...	...	40	...	15	[9]200	199	2	...	[9]53	14	115	...	30	28
1	2	4	...	2	[9]160	160	...	...	[9]37	...	2	[9]33	88	29
6	5	96	...	184	[9]146	145	12	3	[9]51	10	67	[9]2	14	30
2	81	...	...	...	[9]546	545	1	...	[9]165	26	93	[9]3	284	31
200	50	263	...	58	[9]720	720	12	12	[9]72	3	63	[9]95	478	32
32	213	381	...	415	[10]1,778	1,778	6	6	[10]543	162	422	[10]4	803	33
237	247	579	...	472	[10]1,509	1,509	14	14	[10]540	67	379	[10]4	572	34
195	...	105	...	4	[10]5	5	2	2	...	...	3	...	...	35
xxx	72	xxx	xxx	xxx	[10]418	418	...	...	[10]329	...	38	...	51	36
...	...	...	...	...	[10]34	34	6	6	...	...	27	...	1	37
33	120	400	...	411	[10]985	985	3	3	[10]177	66	291	[10]4	510	38
9	55	74	...	57	[10]67	67	3	3	[10]34	1	20	...	10	39
1	40	15	...	32	[10]74	74	1	1	[10]22	7	24	...	27	40
19	189	60	...	67	43	50	11	16	45	83	60	...	49	41
1	37	15	...	32	[10]42	42	1	1	[10]12	5	19	...	10	42
...	3	...	...	...	[10]32	32	(11)	(11)	[10]10	2	5	...	17	43
...	...	...	...	...	...	...	...	...	...	...	...	...	...	44
5	~~1,649~~	43	...	59	[10]390	390	11	9	[10]106	8	46	[10]46	181	45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
...	...	...	...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
...	5,310	...	...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	48
...	...	...	...	...	[10]1	1	1	1	...	...	...	...	...	49
...	...	8	...	3	[10]30	30	(11)	...	10	2	14	...	6	50
10	17	18	...	28	[10]785	785	...	...	[10]185	...	10	[10]150	440	51
(11)	9	...	...	...	[10]54	54	(11)	...	[10]19	2	5	(11)	30	52
...	1	...	...	...	...	...	...	...	...	...	...	...	...	53
...	88	19	...	...	[10]2,342	2,342	...	...	[10]410	110	1,447	...	485	54
...	4.23	0.08	...	...	1.37	1.58	...	...	0.84	1.33	3.57	...	0.88	55

lationship to other statistics shown. Such estimated values are not included in the costs shown for the Natursl gas liquids industries and no vslue added figure is shown for these industries. [7]Figures for 1 nonproducing bauxite mine are included with those for Other metal mining. [8]Includes man-hours worked on floating equipment. [9]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufsctures are included with figures for supplies. [10]Excludes figures for crushed stone and clay operations clsssified in manufsctures. [11]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN ARKANSAS COUNTIES, BY INDUSTRY GROUPS: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Arkansas, all mineral operations:									
Including operations in manufactures	423	138,879	110,107	5,206	925	10,425	17,995	4,982	[2]12,319
Mineral industries only:									
Including crude petroleum and natural gas extraction	410	136,241	107,904	4,985	925	9,986	17,501	4,982	12,319
Excluding crude petroleum and natural gas extraction	142	50,111	37,816	2,812	359	5,782	9,719	1,804	2,128
Metal mining and Bituminous coal mining, total	79	22,243	17,431	1,327	222	2,461	4,865	1,171	686
Bauxite	17	15,889	12,383	624	182	1,221	2,463	1,009	282
Manganese ores	19	1,017	881	144	1	217	241	2	258
Bituminous coal	33	3,692	2,783	430	27	668	1,564	119	45
Other metal mining and Bituminous coal contract services	10	1,645	1,384	129	12	355	597	41	101
Crude petroleum and natural gas extraction, total	268	[3]86,130	70,085	2,173	566	4,204	7,782	3,178	10,191
Crude petroleum and natural gas[4]	204	73,741	61,194	1,220	489	2,430	4,673	2,762	9,079
Natural gas liquids	9	([3])	(NA)	210	48	448	977	273	192
Oil and gas field contract services[5]	55	6,578	4,884	743	29	1,326	2,132	143	920
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	76	30,506	22,591	1,706	137	3,760	5,348	633	[2]1,442
Mineral industries only	63	27,868	20,388	1,485	137	3,321	4,854	633	1,442
Dimension stone (including operations in manufactures)	15	418	303	87	5	160	166	19	11
Crushed and broken stone (including operations in manufactures)	12	9,812	6,502	486	52	1,099	1,592	222	(NA)
Sand and gravel	27	4,605	3,139	405	22	910	1,146	111	359
Clay, ceramic, and refractory minerals (including operations in manufactures)	11	2,017	1,562	178	...	352	432	...	(NA)
Other nonmetallic minerals (except fuels) mining	11	13,654	11,085	550	58	1,239	2,012	281	562
COUNTY									
Calhoun, total	6	(NA)	(NA)	[6]65	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	3	(NA)	(NA)	[6]33	([6])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	3	335	249	27	5	60	74	12	...
Columbia, total	57	(NA)	(NA)	[6]579	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	51	(NA)	(NA)	[6]440	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	6	3,325	(NA)	120	19	257	508	117	135
Hot springs (including operations in manufactures)	6	13,949	11,296	655	51	1,424	2,218	988	560
Independence (mineral industries only)	22	1,061	936	[6]145	([6])	213	[6]232	([6])	263
Manganese ores	15	964	851	129	1	184	207	2	256
Izard	4	1,161	673	115	18	216	302	64	86
Johnson (including operations in manufactures)	14	1,924	1,260	162	10	225	529	60	32
Bituminous coal	10	1,707	1,121	137	10	181	477	60	27
Lafayette, total	26	(NA)	(NA)	[6]198	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	22	(NA)	(NA)	[6]58	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	4	3,060	2,595	111	29	228	439	178	58
Logan	9	527	473	92	5	141	254	29	7
Miller	16	(NA)	(NA)	[6]131	([6])	(NA)	(NA)	(NA)	(NA)
Nevada	20	(NA)	(NA)	[6]51	([6])	(NA)	(NA)	(NA)	(NA)
Ouachita	73	(NA)	(NA)	[6]292	([6])	(NA)	(NA)	(NA)	(NA)
Pulaski	15	(NA)	(NA)	[6]550	([6])	(NA)	(NA)	(NA)	(NA)
Bauxite	10	3,185	1,786	109	27	221	389	157	59
Saline	12	14,424	11,951	642	167	1,339	2,652	897	310
Bauxite	7	12,704	10,597	515	155	1,000	2,074	852	223
Sebastian (mineral industries only)	22	(NA)	(NA)	[6]272	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	17	1,577	1,309	229	17	402	880	59	17

See footnotes at end of table.

Table 3.--GENERAL STATISTICS FOR MINERAL OPERATIONS IN ARKANSAS COUNTIES, BY INDUSTRY GROUPS: 1954--Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY--Continued									
Union (mineral industries only), total...	111	(NA)	(NA)	[6]720	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7].....	108	(NA)	(NA)	[6]661	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids.....	3	666	562	43	6	86	184	26	12

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 6.
[2]See table 2, footnote 10.
[3]See table 2, footnote 6.
[4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.
[6]Figures for "All other employees" are included with those for "Production and development workers."
[7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	All mineral operations			Metal mining						Bituminous coal mining	
	Total	Classified in mineral industries	Included in manufactures	Iron ores	Lead and zinc ores	Bauxite	Manganese ores	Metal mining contract services	Uranium-radium-vanadium ores	Bituminous coal	Bituminous coal mining contract services
Arkansas, total	423	410	13	1	2	17	19	3	1	33	3
Arkansas	1	1	...	...	...	...	...	...	...	...	...
Calhoun	6	6	...	...	...	...	...	...	...	...	...
Carroll	1	1	...	...	1	...	...	...	...	...	...
Clark	1	1	...	...	...	...	...	...	...	...	...
Clay	1	1	...	...	...	...	...	...	...	...	...
Columbia	57	57	...	...	...	...	...	...	...	...	...
Conway	1	1	...	...	...	...	...	...	...	...	...
Craighead	2	1	1	...	...	...	...	...	...	...	...
Crawford	2	2	...	...	...	...	...	...	...	...	...
Cross	1	1	...	...	...	...	...	...	...	...	...
Drew	2	2	...	...	...	...	...	...	...	...	...
Franklin	2	2	...	...	...	...	...	...	...	1	...
Fulton	1	1	...	...	...	...	...	...	...	...	...
Garland	4	4	...	...	...	...	...	...	...	...	...
Greene	2	2	...	...	...	...	...	...	...	...	...
Hempstead	1	...	1	...	...	...	...	...	...	...	...
Hot Springs	6	3	3	...	...	...	...	...	...	...	...
Howard	2	...	2	...	...	...	...	...	...	...	...
Independence	24	22	2	...	...	...	15	...	...	...	...
Izard	4	4	...	...	...	...	1	...	...	...	...
Jackson	1	1	...	...	...	...	...	...	...	...	...
Jefferson	1	1	...	...	...	...	...	...	...	...	...
Johnson	14	13	1	...	...	...	...	...	...	10	1
Lafayette	26	26	...	...	...	...	...	...	...	...	...
Lawrence	1	1	...	...	...	...	...	...	...	...	...
Little River	2	2	...	...	...	...	...	...	...	...	...
Logan	10	9	1	...	...	...	...	...	...	5	1
Madison	1	1	...	...	...	...	...	...	...	...	...
Marion	1	1	...	...	...	...	...	...	...	...	...
Miller	16	16	...	...	...	...	...	...	...	...	...
Mississippi	1	1	...	...	...	...	...	...	...	...	...
Monroe	1	1	...	...	...	...	...	...	...	...	...
Montgomery	1	1	...	...	...	...	...	...	...	...	...
Nevada	20	20	...	1	...	...	...	...	...	...	...
Ouachita	73	73	...	...	...	...	...	...	...	...	...
Pike	1	1	...	...	...	...	...	...	...	...	...
Polk	3	3	...	...	...	...	2	...	...	...	...
Pope	1	1	...	...	...	...	...	...	...	...	...
Pulaski	15	15	...	...	...	10	...	...	...	...	...
St. Francis	2	2	...	...	...	...	...	...	...	...	...
Saline	12	12	...	...	...	7	...	3	...	...	...
Sebastian	23	22	1	...	1	...	...	...	1	17	1
Sharp	1	1	...	...	...	...	1	...	...	...	...
Stone	1	1	...	...	...	...	...	...	...	...	...
Union	112	111	1	...	...	...	...	...	...	...	...
Washington	2	2	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining									
				Dimension stone						Crushed and broken stone			
				Limestone				Stone, n.e.c.		Limestone			
	Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Classified in mineral industries	Included in manufactures	Marble	Sandstone	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Granite	Slate
Arkansas, total.....	204	9	55	2	1	2	7	2	1	6	2	1	1
Arkansas.....	...	...		...	...	...	...	...	...	...	...	...	...
Calhoun.....	3	...		...	...	...	...	...	...	...	...	...	...
Carroll.....	...	...		...	...	...	...	...	...	...	...	...	...
Clark.....	...	...		...	...	...	...	...	...	...	...	...	...
Clay.....	...	...		...	...	...	...	...	...	...	...	...	...
Columbia.....	51	3		...	...	...	...	...	...	...	...	...	...
Conway.....	1	...		...	...	...	...	...	...	...	...	...	...
Craighead.....	...	...		...	...	...	...	...	...	...	...	...	...
Crawford.....	1	...		...	...	...	...	...	...	...	...	...	...
Cross.....	...	...		...	...	...	...	...	...	...	...	...	...
Drew.....	...	...		...	...	...	...	...	...	...	...	...	...
Franklin.....	...	...		...	...	...	...	1	...	...	...	...	...
Fulton.....	1	...		...	...	...	...	...	...	...	...	...	...
Garland.....	...	...		...	...	...	...	...	...	...	...	...	...
Greene.....	...	...		...	...	...	...	...	...	...	...	...	...
Hempstead.....	...	...		...	...	...	...	...	...	...	...	...	...
Hot Springs.....	...	...		...	...	...	...	...	...	...	...	...	...
Howard.....	...	...		...	...	...	...	...	...	...	1	...	...
Independence.....	...	...		2	1	2	2	...	...	...	1	...	...
Izard.....	...	...		...	...	...	...	...	...	2	...	...	...
Jackson.....	...	...		...	...	...	...	...	...	...	...	...	...
Jefferson.....	...	...	(NA)	...	...	...	...	...	...	...	...	...	...
Johnson.....	...	...		...	...	...	1	...	...	...	...	...	...
Lafayette.....	22	2		...	...	...	...	...	...	...	...	...	...
Lawrence.....	...	...		...	...	...	...	...	...	...	...	...	...
Little River.....	...	...		...	...	...	...	...	...	1	...	...	...
Logan.....	...	...		...	...	...	3	...	1	...	...	...	...
Madison.....	...	...		...	...	...	...	...	...	1	...	...	...
Marion.....	...	...		...	...	...	...	...	...	1	...	...	...
Miller.....	14	1		...	...	...	...	...	...	...	...	...	...
Mississippi.....	...	...		...	...	...	...	...	...	...	...	...	...
Monroe.....	1	...		...	...	...	...	...	...	...	...	...	...
Montgomery.....	...	...		...	...	...	...	...	...	...	...	...	1
Nevada.....	19	...		...	...	...	...	...	...	...	...	...	...
Ouachita.....	72	...		...	...	...	...	...	...	...	...	...	...
Pike.....	...	...		...	...	...	...	...	...	...	...	...	...
Polk.....	...	...		...	...	...	...	...	...	...	...	...	...
Pope.....	1	...		...	...	...	...	...	...	...	...	...	...
Pulaski.....	2	...		...	...	...	...	...	...	...	...	1	...
St. Francis.....	1	...		...	...	...	...	...	...	...	...	...	...
Saline.....	...	...		...	...	...	...	...	...	...	...	...	...
Sebastian.....	1	...		...	...	...	...	1	...	...	...	...	...
Sharp.....	...	...		...	...	...	...	...	...	...	...	...	...
Stone.....	...	...		...	...	...	1	...	...	...	...	...	...
Union.....	108	3		...	...	...	...	...	...	...	...	...	...
Washington.....	1	...		...	...	...	...	...	...	1	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nonmetallic minerals (except fuels) mining—Continued												
	Crushed and broken stone—Continued		Sand and gravel		Clay, ceramic, and refractory minerals				Natural abrasive stones	Chemical and fertilizer mineral mining		Miscellaneous nonmetallic minerals (except fuels) mining	
	Sandstone	Stone, n.e.c.	Common sand and gravel	Glass sand	Fire clay (included in manufactures)	Kaolin and ball clay	Clay, ceramic, and refractory minerals, n.e.c.			Barite	Chemical and fertilizer mineral mining, n.e.c.	Gypsum	Talc, soapstone, and pyrophyllite
							Classified in mineral industries	Included in manufactures					
Arkansas, total	1	1	26	1	2	1	1	7	4	2	3	1	1
Arkansas	...	...	1	...	...	...	...	...	...	...	...	...	...
Calhoun	...	...	3	...	...	...	...	...	...	...	...	...	...
Carroll	...	...	...	...	...	...	...	...	...	...	...	...	...
Clark	...	...	1	...	...	...	...	...	...	...	...	...	...
Clay	...	...	1	...	...	...	...	...	...	...	...	...	...
Columbia	...	...	1	...	...	...	...	...	...	...	2	...	...
Conway	...	...	...	...	...	...	...	...	...	...	...	...	...
Craighead	...	...	1	...	...	...	...	1	...	...	...	...	...
Crawford	...	...	1	...	...	...	...	...	...	...	...	...	...
Cross	...	...	1	...	...	...	...	...	...	...	...	...	...
Drew	...	...	2	...	...	...	...	...	...	...	...	...	...
Franklin	...	...	...	...	...	...	...	...	...	...	...	...	...
Fulton	...	...	...	...	...	...	...	...	...	...	...	...	...
Garland	...	...	...	...	...	...	...	...	4	...	...	...	...
Greene	...	...	2	...	...	...	...	...	...	...	...	...	...
Hempstead	...	...	...	...	...	...	...	1	...	...	...	...	...
Hot Springs	...	...	1	...	2	...	...	1	...	2	...	...	...
Howard	...	...	...	...	...	...	...	1	...	...	...	...	...
Independence	...	...	1	...	...	...	...	...	...	...	...	...	...
Izard	...	...	...	1	...	...	...	...	...	...	...	...	...
Jackson	...	...	1	...	...	...	...	...	...	...	...	...	...
Jefferson	...	...	1	...	...	...	...	...	...	...	...	...	...
Johnson	...	...	...	...	...	...	1	1	...	...	...	...	...
Lafayette	...	...	1	...	...	...	...	...	...	...	1	...	...
Lawrence	...	...	1	...	...	...	...	...	...	...	...	...	...
Little River	...	...	1	...	...	...	...	...	...	...	...	...	...
Logan	...	...	...	...	...	...	...	...	...	...	...	...	...
Madison	...	...	...	...	...	...	...	...	...	...	...	...	...
Marion	...	...	...	...	...	...	...	...	...	...	...	...	...
Miller	...	...	1	...	...	...	...	...	...	...	...	...	...
Mississippi	...	...	1	...	...	...	...	...	...	...	...	...	...
Monroe	...	...	...	...	...	...	...	...	...	...	...	...	...
Montgomery	...	...	...	...	...	...	...	...	...	...	...	...	...
Nevada	...	...	...	...	...	...	...	...	...	...	...	...	...
Ouachita	...	...	1	...	...	...	...	...	...	...	...	...	...
Pike	...	...	...	...	...	...	...	...	...	...	...	1	...
Polk	1	...	...	...	...	...	...	...	...	...	...	...	...
Pope	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulaski	...	1	1	...	...	...	...	...	...	...	...	...	...
St. Francis	...	...	1	...	...	...	...	...	...	...	...	...	...
Saline	...	...	...	...	...	1	...	...	...	...	...	...	1
Sebastian	...	...	...	...	...	...	...	1	...	...	...	...	...
Sharp	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone	...	...	...	...	...	...	...	...	...	...	...	...	...
Union	...	...	...	...	...	...	...	1	...	...	...	...	...
Washington	...	...	...	...	...	...	...	...	...	...	...	...	...

NA Not available.
[1]See table 3, footnote 4, and for counties, footnote 7.
[2]See table 3, footnote 5.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Arkansas, all mineral operations:												
Including operations classified in manufactures	423	62	158	66	65	46	18	5	3	...	...	...
Mineral industries only	410	62	152	64	65	42	17	5	3	...	...	...
Metal mining, total	43	4	13	11	4	8	1	...	2	...	...	...
Iron ores	1	...	1	...	...	...	...	...	...	...	...	...
Lead and zinc ores	2	1	1	...	...	...	...	...	...	...	...	...
Bauxite	17	...	4	4	3	4	...	...	2	...	...	...
Manganese ores	19	3	6	6	1	3	...	...	...	...	...	...
Metal mining contract services	3	...	...	1	...	1	1	...	...	...	...	...
Uranium-radium-vanadium ores	1	...	1	...	...	...	...	...	...	...	...	...
Bituminous coal mining, total	36	11	10	6	2	2	5	...	...	...	...	...
Bituminous coal	33	10	9	5	2	2	5	...	...	...	...	...
Bituminous coal mining contract services	3	1	1	1	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	268	41	113	40	39	24	9	2	...	...	...	...
Crude petroleum and Natural gas	204	41	95	30	18	14	4	2	...	...	...	...
Natural gas liquids	9	...	...	...	6	1	2	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	18	...	4	4	4	6	...	...	...	...	...	...
Building, repairing, and dismantling rigs and derricks	3	...	1	2	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c.	34	...	13	4	11	3	3	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	76	6	22	9	20	12	3	3	1	...	...	...
Mineral industries only	63	6	16	7	20	8	2	3	1	...	...	...
Dimension stone:												
Limestone:												
Classified in mineral industries	2	...	2	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Marble	2	1	1	...	...	...	...	...	...	...	...	...
Sandstone	7	1	2	...	3	1	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	2	...	1	...	1	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	6	1	...	2	1	2	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	2	...	...	...	...	...	...
Granite	1	...	...	...	...	...	...	1	...	...	...	...
Slate	1	...	...	...	1	...	...	...	...	...	...	...
Sandstone	1	...	...	...	1	...	...	...	...	...	...	...
Stone, n.e.c.	1	...	...	...	...	...	...	1	...	...	...	...
Sand and gravel:												
Common sand and gravel	26	1	5	5	10	4	1	...	...	...	...	...
Glass sand	1	...	...	...	...	...	1	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	2	...	...	1	...	...	1	...	...	...	...	...
Kaolin and ball clay	1	...	...	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	7	...	5	...	...	2	...	...	...	...	...	...
Natural abrasive stones	4	2	2	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Barite	2	...	...	...	...	...	...	1	1	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	3	...	1	...	1	1	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels) mining:												
Gypsum	1	...	...	...	1	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	1	...	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Arkansas, total	4,985	107,904	3,816	0.77	35	3,552	513	868	27,329	...	34	50	16
Metal mining and Bituminous coal mining, total	1,327	17,431	323	0.24	19	307	23	822	363	1	62	8	29
Bauxite	624	12,383	179	0.29	14	179	...	492	179	2	97	1	...
Manganese ores	144	881	144	1.00	164	128	14	14	175	...	19	17	64
Bituminous coal	430	2,783	...	...	...	...	9	316	9	...	...	...	...
Other metal mining and Bituminous coal contract services	129	1,384	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and Natural gas extraction, total	2,173	[4]70,085	1,641	0.76	23	1,561	xxx	xxx	[5]21,919	...	2	95	3
Crude petroleum and natural gas	1,220	61,194	734	0.60	12	1,281	xxx	xxx	(NA)	...	1	91	[6]8
Natural gas liquids	210	([4])	888	4.23	(NA)	272	xxx	xxx	21,166	...	1	99	...
Oil and gas field contract services:													
Drilling oil and gas wells	249	2,301	19	0.08	8	8	xxx	xxx	(NA)	...	58	...	42
Building, repairing, and dismantling rigs and derricks	14	60	...	...	...	...	xxx	xxx	...	...	...	...	...
Oil and gas field contract services, n.e.c	480	2,523	...	...	...	...	xxx	xxx	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	1,485	20,388	1,852	1.25	91	1,684	490	46	5,047	1	50	27	22
Stone and clay:													
Crushed and broken limestone	83	574	110	1.33	192	88	...	...	110	...	100	...	...
Other stone and clay	447	5,590	300	0.67	54	154	...	...	460	...	100	...	...
Sand and gravel	405	3,139	957	2.36	305	957	490	...	2,101	...	20	37	[6]43
Other nonmetallic minerals (except fuels) mining	550	11,085	485	0.88	44	485	...	46	2,376	1	87	12	...

NA Not available.
xxx Not applicable.
[1]Includes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 425 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]See table 2, footnote 6.
[5]For industries other than Natural gas liquids, includes water intake only.
[6]Represents "not specified."



CALIFORNIA

104-1

MINING IN CALIFORNIA: 1954

Rank among States:
Employment, 5
Value of shipments, 2



Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes common clay and shale and contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries		
	1954	1939[1]	1919[2]	1909[2]	1902[2]	1954	1939[1]	1929
Number of operating companies	1,991	1,803	(NA)	[3]2,021	[3]2,012	1,111	[3]693	(NA)
Number of establishments	2,254	(NA)	785	2,025	(NA)	1,286	(NA)	533
Number of mines and quarries	1,265	780	411	2,194	1,743	1,265	780	614
Number of oil and gas wells producing at end of year	32,614	16,657	9,212	4,316	2,603	xxx	xxx	xxx
Number of preparation plants	780	478	(NA)	(NA)	(NA)	702	382	(NA)
Value of shipments[4]....$1,000	[5]1,512,186	381,608	163,770	63,382	28,870	[5]208,567	78,681	38,646
Value added in mining....do	[5]1,329,505	318,401	121,706	32,768	21,667	[5]158,855	60,295	27,938
Number of persons engaged, total	42,368	41,721	22,316	27,565	16,290	13,923	16,017	10,622
Production and development workers	30,159	33,561	19,747	22,605	[6]14,539	9,894	13,792	9,224
All other employees	9,945	7,114	2,099	2,509	1,751	2,689	1,668	[7]1,241
Proprietors and firm members	2,264	1,046	470	2,451	(NA)	1,340	557	[8]157
Performing manual labor	1,306	464	176	1,145	(NA)	967	317	(NA)
Man-hours worked by production and development workers....1,000	60,630	68,546	(NA)	(NA)	(NA)	20,882	32,279	(NA)
Principal expenses designated below, total....$1,000	542,980	140,154	79,708	55,146	21,889	116,990	44,636	27,874
Wages of production and development workers....do	142,350	57,347	32,348	21,153	12,478	44,302	21,973	13,891
Salaries of all other employees....do	63,754	19,600	5,296	3,379	2,208	14,313	4,277	[7]3,275
Minerals received for preparation....do	28,971	(NA)	876	2,763	(NA)	[9]38,518	(NA)	(NA)
Supplies....do	[9]141,818	[10]28,707	32,618	24,053	6,501		11,878	[11]7,159
Fuel[12]....do	[9]14,477	[10]7,680	4,467	3,014		[9]8,117	2,593	[11]769
Purchased electric energy....do	[9]10,543	[10]6,118	2,670			[9]4,004	3,533	[11]2,049
Contract work....do	[9]141,067	[10]20,702	1,433	784	702	[9]7,736	382	731
Purchased machinery installed....do	[13]67,642					[13]13,513		1,964
Capital expenditures, total....do	[13]221,862	(NA)	(NA)			[13]22,201	(NA)	(NA)
Development and exploration of mineral property....do	[13]139,203			(NA)	(NA)	[13]5,225		4,933
Preparation plant construction....do	[13]6,698	3,657				[13]4,237	1,107	
Other construction....do	[13]10,042		(NA)			[13]950		
New machinery and equipment....do	[13]61,064	36,192				[13]9,797	4,409	(NA)
Used plant and equipment....do	[13]4,855	1,863				[13]1,992	782	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[13]3,205	1,373	320	181	76	[13]696	370	168
Per production worker	101	41	16	8	6	70	27	18
Prime movers....1,000	[13]2,688	944	210	136	73	[13]520	148	33
Electric motors driven by purchased energy....do	[13]517	429	110	45	3	[13]176	222	135
Horsepower rating of electric motors driven by energy generated at establishment....do	[13]63	33	11	5	13	[13]33	30	2
Energy used....million kwh equivalent	[13]38,427	[10]29,002	(NA)			[13]5,030	2,945	[8]934
Coal....1,000 short tons	[13]1	1	2			(15)	1	[8]3
Fuel oils[14]....1,000 barrels	[13]2,558	[10]1,939	2,268			[13]1,958	1,264	[8]312
Gas[14]....million cu.ft	[13]102,416	[10]80,216	52,203	(NA)	(NA)	[13]2,472	562	[8]397
Electric energy purchased....million kwh	[13]1,005	[10]673	(NA)			[13]372	427	[8]185
Electric energy generated and used....do	[13]245	[10]111	(NA)			[13]372	104	[8]3

NA Not available. xxx Not applicable. [1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing granite at such operations was $47,000; this value has been included in the value of shipments and value added in mining. The comparable value for limestone and slate is not available. [2]For 1919 and 1909 excludes sand and gravel operations and stone quarries operated as part of cement and lime establishments. The value of products of such establishments in 1929 was about $9,669,000. For 1902, excludes sand and gravel operations but includes data for 2 cement plants and for lime plants producing lime valued at $396,000. [3]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry. [4]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication. [5]Excludes data for the Uranium-radium-vanadium ores industry. [6]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period. [7]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments. [8]Excludes data for nonproducing operations. [9]Figures for fuels, electric energy, and contract work for crushed stone, clay, and gypsum operations classified in manufactures are included with figure for supplies. [10]Excludes data for oil and gas field contract service establishments. [11]Figures for fuel and purchased electric energy for nonproducing operations are included with those for supplies. [12]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishments for power or heat. [13]Excludes statistics for crushed stone, clay, and gypsum operations classified in manufactures. [14]Includes data for fuels produced and used at the same establishment for power or heat. [15]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	California, total		Metal mining and Lignite								
		Including operations classified in manufactures	Mineral industries only	Total	Copper, lead, zinc, gold, and silver ores				Tungsten ores	Chromium ores	Mercury ores	Other metal mining and Lignite
					Total	Lead and zinc ores	Lode gold	Placer gold				
1	Number of operating companies	1,991	1,938	616	195	15	89	72	197	104	39	84
2	Number of establishments	2,254	2,190	662	203	17	93	73	210	115	42	92
	Number of mines, quarries, and producing oil and gas wells:											
3	1954	33,879	33,815	636	200	17	91	73	198	111	42	85
4	1939	17,437	(NA)	462	416	...	209	200	10	2	32	2
5	Number of preparation plants	780	770	266	113	1	53	56	74	33	36	10
	Value of shipments:[2]											
6	1954 ..... $1,000	[3]1,512,186	[3]1,494,686	[3]46,713	9,231	735	3,501	4,808	19,072	2,634	2,987	[3]12,789
7	1939 ..... do	[4]381,608	(NA)	51,794	47,876	...	26,663	20,878	1,128	([6])	1,088	[6]1,702
8	Value added in mining ..... do	[3]1,329,505	[3]1,315,181	[3]31,893	6,369	610	2,418	3,043	10,180	1,788	2,067	[3]11,489
9	Number of persons engaged, total	42,368	41,615	3,748	1,410	112	672	540	1,133	332	354	519
10	Production and development workers	30,159	29,423	2,407	1,033	59	515	396	657	131	230	356
11	All other employees	9,945	9,943	449	147	30	64	44	171	20	65	46
12	Proprietors and firm members	2,264	2,249	892	230	23	93	100	305	181	59	117
13	Performing manual labor	1,306	1,294	740	185	16	77	81	265	151	50	89
	Man-hours worked by production and development workers:											
14	1954 1,000	60,630	59,159	5,609	2,482	128	1,205	1,005	1,608	259	508	752
15	1939 ..... do	[4]68,546	(NA)	[5]22,820	[5]20,248	...	[5]14,334	[5]5,673	[5]540	([6])	[5]829	[6]1,203
	At mines:											
16	Underground ..... do	2,720	2,664	2,333	965	98	745	19	794	58	401	115
17	Open-pit ..... do	7,072	5,774	1,745	638	1	19	[10]756	116	77	22	249
18	Surface (mine shops, yards, etc.) ..... do	1,352	1,266	610	682	17	276	224	207	13	23	328
19	At preparation plants ..... do	13,284	13,253	921	197	12	165	6	491	111	62	60
20	At oil and gas field operation	36,202	36,202	...	...	...	...	...	...	...	...	...
21	Man-hours spent on development and exploration work (included above) ..... do	13,509	13,508	767	482	22	332	40	150	21	35	79
22	Principal expenses designated below, total $1,000	542,980	536,828	31,583	8,380	597	3,416	3,763	13,826	1,733	2,277	5,367
23	Wages of production and development workers ..... do	142,350	139,397	10,742	4,050	263	1,933	1,603	3,726	523	1,001	1,442
24	Salaries of all other employees ..... do	63,754	63,747	1,972	776	172	315	265	634	63	252	247
25	Minerals received for preparation ..... do	28,971	28,970	5,010	228	...	...	...	4,329	741	32	858
26	Supplies ..... do	[11]141,818	138,656	7,974	1,971	102	733	1,192	3,988		837	
	Purchased fuel:											
27	Coal ..... do	[11]8	8	...	...	...	...	...	...	...	...	...
28	Fuel oil ..... do	[11]7,128	7,128	469	66	12	33	13	270	11	98	24
29	Gas ..... do	[11]1,171	1,170	2	...	...	...	...	([15])	([15])	([15])	2
30	Other fuels ..... do	[11]6,170	6,163	354	80	10	35	26	86	57	5	126
31	Purchased electric energy ..... do	[11]10,543	10,529	1,311	978	24	301	631	209	16	47	61
32	Contract work ..... do	[11]141,067	141,060	3,749	231	14	66	33	584	322	5	2,607
33	Purchased machinery installed ..... do	[13]67,642	67,619	2,490	299	14	155	89	1,023	257	129	782
34	Capital expenditures, total ..... do	[13]221,862	221,823	6,564	991	51	240	219	1,597	558	233	3,185
35	Development and exploration of mineral property ..... do	[13]139,203	139,188	1,636	694	29	138	91	459	145	79	259
36	Preparation plant construction ..... do	[13]6,698	6,695	2,421	35	...	3	24	224	146	91	1,925
37	Other construction ..... do	[13]10,042	10,042	472	27	8	5	14	150	14	1	280
38	New machinery and equipment ..... do	[13]61,064	61,060	1,376	143	8	74	34	543	110	48	532
39	Used plant and equipment ..... do	[13]4,855	4,838	659	92	6	20	56	221	143	14	189
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[13]3,205	3,203	179	95	7	37	47	61	14	7	2
41	Per production worker	101	103	74	92	119	72	118	([14])	([14])	30	6
42	Prime movers 1,000	[13]2,688	2,687	95	35	4	14	14	40	13	5	2
43	Electric motors driven by purchased energy ..... do	[13]517	516	84	60	3	23	33	21	1	2	([15])
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	[13]63	63	4	1	...	([15])	([15])	3	([15])	([15])	([15])
45	Energy used ..... million kwh equivalent	[13]38,427	38,425	413	144	6	48	85	155	19	50	45
	Produced and used for fuel:											
46	Crude petroleum ..... 1,000 barrels	269	269	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
47	Natural gas ..... million cu. ft	96,185	96,185	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Fuel purchased:											
48	Coal ..... 1,000 short tons	[13]1	1	...	...	...	...	...	...	...	...	...
49	Fuel oil ..... 1,000 barrels	[13]2,289	2,289	107	10	1	5	3	67	2	24	4
50	Gas ..... million cu.ft	[13]6,231	6,231	18	...	...	...	...	1	4	9	4
51	Electric energy purchased ..... million kwh	[13]1,005	1,004	136	107	2	30	73	19	1	4	5
52	Electric energy generated and used ..... do	[13]245	245	9	1	...	1	...	4	([15])	1	3
53	Water intake, including mine water used ..... million gallons	[13]41,215	41,214	10,705	9,651	19	1,172	8,438	845	87	6	116
54	Per production worker ..... do	1,37	1.40	4.45	9.34	0.32	2.28	21.31	([14])	([14])	0.03	0.32

See footnote at end of table.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction						Nonmetallic minerals (except fuels) mining						
			Oil and gas field contract services			Total		Dimension stone				
								All stone				
Total	Crude petroleum and Natural gas	Natural gas liquids	Drilling oil and gas wells	Building, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures	Mineral industries only	Granite (including operations classified in manufactures)	Other dimension stone (including operations classified in manufactures)	
882	624	25	98	8	154	503	450	15	7	7	8	1
968	635	72	99	8	154	624	560	15	7	7	8	2
32,614	32,395	xxx	181	...	38	629	565	15	7	7	8	3
16,657	(NA)	xxx	(NA)	(NA)	(NA)	318	(NA)	13	(NA)	7	6	4
78	xxx	78	xxx	xxx	xxx	436	426	8	...	4	4	5
1,303,619	1,081,525	113,924	72,955	1,924	33,291	161,854	144,354	557	200	304	253	6
302,927	250,424	36,133	7,874	2,063	6,433	[4]26,887	(NA)	[4][7]185	(NA)	[4]115	[4][7]70	7
[9]1,170,650	1,012,679	([9])	47,068	1,508	24,740	126,962	112,638	455	134	227	228	8
28,445	17,762	2,113	5,338	173	3,059	10,175	9,422	84	31	44	40	9
20,265	11,091	1,791	4,691	141	2,551	7,487	6,751	62	26	33	29	10
7,256	6,003	310	546	26	371	2,240	2,238	3	1	3	...	11
924	668	12	101	6	137	448	433	19	4	8	11	12
339	201	...	55	5	78	227	215	13	1	5	8	13
39,748	21,979	3,546	8,633	222	5,368	15,273	13,802	132	57	74	58	14
36,267	28,074	2,752	2,368	745	2,328	[4][5]9,459	(NA)	[4][7]101	(NA)	[4]28	[4][7]73	15
xxx	xxx	xxx	xxx	xxx	xxx	387	331	11	...	...	11	16
xxx	xxx	xxx	xxx	xxx	xxx	5,327	4,029	71	48	44	27	17
xxx	xxx	xxx	xxx	xxx	xxx	742	656	19	9	9	10	18
3,546	xxx	3,546	xxx	xxx	xxx	8,817	8,786	31	...	21	10	19
36,202	21,979	xxx	8,633	222	5,368	...	...	...	...	...	...	20
12,682	3,947	...	8,124	211	400	60	59	1	...	...	1	21
[9]425,990	304,874	[9]20,719	54,112	1,317	22,690	85,407	79,255	359	172	221	138	22
98,048	53,728	8,990	22,653	686	11,991	33,560	30,607	232	101	134	98	23
49,441	40,396	2,180	4,423	177	2,265	12,341	12,334	9	2	9	...	24
[9]132,271	xxx 74,442	[9]6,247	xxx 22,356	xxx 400	xxx 6,548	[11]25,534	22,371	1 44	... 22	... 27	... 17	25 26
7	4	...	3	...	...	[11]1	1	...	...	...	...	27
1,838	662	36	1,040	4	96	[11]4,821	4,821	...	...	...	...	28
564	447	2	108	...	7	[11]605	604	1	([15])	...	1	29
3,951	2,003	46	908	20	974	[11]1,865	1,858	7	...	3	4	30
6,539	5,890	578	34	...	37	[11]2,693	2,679	21	7	12	9	31
133,331	127,302	2,640	2,587	30	772	[11]3,987	3,980	44	37	35	9	32
54,129	43,656	2,226	5,718	10	2,519	[13]11,023	11,000	27	4	1	26	33
199,661	185,560	4,784	6,867	48	2,402	[13]15,637	15,598	43	4	2	41	34
133,978	133,079	...	787	...		[13]3,589	3,574	15	...	...	15	35
2,461	xxx	2,461	xxx	xxx	229	[13]1,816	1,813	3	...	...	3	36
9,092	8,904	...	71	...		[13]478	478	...	...	...	...	37
51,267	42,125	2,309	5,003	48	1,782	[13]8,421	8,417	8	4	1	7	38
2,863	1,452	14	1,006	...	391	[13]1,333	1,316	17	...	1	16	39
2,339	1,417	371	360	9	182	[13]687	685	4	1	3	1	40
115	128	207	77	64	71	92	101	65	38	87	34	41
2,080	1,179	354	359	9	179	[13]513	512	2	([15])	1	1	42
259	238	17	1	...	3	[13]174	173	2	1	2	([15])	43
26	19	3	4	...	...	[13]33	33	...	...	...	...	44
33,397	20,750	11,638	704	6	299	[13]4,617	4,615	2	1	1	1	45
269	269	xxx	...	...	...	xxx	xxx	xxx	xxx	xxx	xxx	46
96,185	58,571	37,576	...	...	38	xxx	xxx	xxx	xxx	xxx	xxx	47
1	1	...	([15])	...	...	([15])	([15])	...	...	...	...	48
331	111	3	199	1	17	[13]1,851	1,851	...	...	...	...	49
3,759	3,276	4	440	...	39	[13]2,454	2,454	1	1	...	1	50
633	568	61	2	...	2	[13]236	235	1	([15])	([15])	1	51
73	46	12	15	...	...	[13]163	163	...	...	...	...	52
7,923	5,250	2,456	213	...	4	[13]22,587	22,586	1	...	1	...	53
0.39	0.47	1.37	0.05	...	([15])	3.02	3.35	0.02	...	0.03	...	54

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Nonmetallic minerals (except fuels) mining—Continued							
		Crushed and broken stone						Sand and gravel	
		All stone (including operations classified in manufactures)	Limestone (mineral industries only)	Granite (mineral industries only)	Trap rock	Sandstone	Stone, n.e.c.	Common sand and gravel	Glass sand and Foundry sand
1	Number of operating companies	98	20	22	15	11	19	250	8
2	Number of establishments	106	22	22	15	11	19	288	12
	Number of mines, quarries, and producing oil and gas wells:								
3	1954	105	22	22	14	11	19	286	12
4	1939	66	10	8	11	8	16	104	8
5	Number of preparation plants	77	18	17	14	11	16	256	12
	Value of shipments:[2]								
6	1954 ..... $1,000	32,587	5,448	3,361	1,782	3,611	5,408	64,072	2,678
7	1939 ..... do	4,771	1,039	737	663	407	[8]499	6,014	374
8	Value added in mining ..... do	25,342	4,109	2,823	1,338	2,998	3,586	51,890	2,285
9	Number of persons engaged, total	1,796	355	276	164	215	286	3,953	130
10	Production and development workers	1,593	311	209	144	187	244	2,844	100
11	All other employees	147	32	44	12	23	34	849	19
12	Proprietors and firm members	56	12	23	8	5	8	260	11
13	Performing manual labor	27	4	11	3	2	7	129	3
	Man-hours worked by production and development workers:								
14	1954 1,000	3,290	640	445	299	416	499	5,948	207
15	1939 ..... do	2,205	(NA)	271	315	242	[8]177	2,144	172
	At mines:								
16	Underground ..... do	90	42	3	...	...	...	...	...
17	Open-pit ..... do	1,970	339	166	139	157	236	[10]2,161	35
18	Surface (mine shops, yards, etc.) ..... do	435	38	131	6	155	92	(NA)	(NA)
19	At preparation plants ..... do	795	221	145	154	104	171	3,787	172
20	At oil and gas field operation ..... do	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
21	Man-hours spent on development and exploration work (included above) ..... do	7	5	...	...	...	2	22	...
22	Principal expenses designated below, total $1,000	15,179	2,928	1,681	1,030	1,638	3,270	30,463	1,025
23	Wages of production and development workers ..... do	7,058	1,266	966	614	938	1,136	13,901	453
24	Salaries of all other employees ..... do	810	172	226	33	174	200	4,231	124
25	Minerals received for preparation ..... do	...	...	...	...	...	...	(NA)	(NA)
26	Supplies ..... do	7,311	1,153	290	257	306	1,518	8,598	240
	Purchased fuel:								
27	Coal ..... do		...	...	...	...	...	1	...
28	Fuel oil ..... do		41	41	15	46	33	512	13
29	Gas ..... do		...	...	3	12	31	66	46
30	Other fuels ..... do		73	45	54	49	65	1,191	6
31	Purchased electric energy ..... do		87	67	41	50	62	1,209	98
32	Contract work ..... do		136	46	13	63	225	754	45
33	Purchased machinery installed ..... do		534	242	145	460	302	3,961	165
34	Capital expenditures, total ..... do		685	193	84	373	414	4,110	220
35	Development and exploration of mineral property ..... do		52	8	...	1	26	102	29
36	Preparation plant construction ..... do		74	6	...	24	70	792	39
37	Other construction ..... do		57	22	...	21	...	231	1
38	New machinery and equipment ..... do		341	100	84	326	83	2,287	150
39	Used plant and equipment ..... do		161	57	...	1	235	698	1
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	(NA)	18	22	10	26	29	408	8
41	Per production worker		56	103	68	139	117	143	87
42	Prime movers 1,000		12	14	7	21	24	323	4
43	Electric motors driven by purchased energy ..... do		6	8	3	5	5	85	4
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do		1	...	([15])	([15])	([15])	...	...
45	Energy used ..... million kwh equivalent		40	29	24	54	63	849	55
	Produced and used for fuel:								
46	Crude petroleum ..... 1,000 barrels	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
47	Natural gas ..... million cu. ft	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Fuel purchased:								
48	Coal ..... 1,000 short tons		...	...	...	...	...	([2])	...
49	Fuel oil ..... 1,000 barrels		9	8	3	13	7	137	3
50	Gas ..... million cu.ft		...	...	7	55	97	764	128
51	Electric energy purchased ..... million kwh		6	4	3	3	5	87	9
52	Electric energy generated and used ..... do	(NA)	1	...	...	...	...	...	...
53	Water intake, including mine water used ..... million gallons		83	89	138	23	10	16,158	193
54	Per production worker ..... do		0.27	0.43	0.96	0.12	0.04	5.68	1.93

NA Not available. xxx Not applicable. [1]Figures for Pumice and pumicite are included with those for Natural abrasives, except sand, in "Other industries." [2]See table 1, footnote 4. [3]See table 1, footnote 5. [4]See table 1, footnote 1. [5]The total for "Gold, silver, copper, lead, and zinc ores" includes, but the separate figures for "Lode gold" and "Placer gold" exclude data for nonproducing establishments. Also, the figure for this group includes, and the figures for the separate industries exclude nonproducing mines as follow: 2 mercury ores mines, 1 tungsten ores mine, 1 natural sodium compounds mine, and 1 sulfur mine. [6]Data for 1 copper ores mine and 2 chromium ores mines are included with those for Other metal mining. [7]Included in the last column with "Other industries" are figures for 2 dimension stone quarries, 2 preparation plants in the Fuller's earth industry, 1 establishment in the Feldspar industry, 2 mines in the Magnesite and brucite industry, 2 mines in the Clay, ceramic, and refractory minerals, n.s.c., industry; 1 tripoli mine, 1 barite mine, 1 potash mine, 1 rock salt mine, 1 sulfur mine, and 1 pyrites mine.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939 —Continued

size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued												
Clay, ceramic, and refractory minerals							Chemical and fertilizer mineral mining		Natural abrasives, except sand, Nonmetallic minerals (except fuels) contract services and miscellaneous nonmetallic minerals (except fuels) mining (including operations in manufactures)			
All clays		Bentonite and Fuller's earth	Fire clay (including operations classified in manufactures)	Kaolin and ball clay, Feldspar, and Magnesite and brucite (including operations classified in manufactures)	Clay, ceramic, and refractory minerals, n.e.c.		Potash, soda, and borate minerals	Other industries	Pumice and pumicite	Talc, soapstone, and pyrophyllite	Other industries	
Including operations classified in manufactures	Mineral industries only				Including operations classified in manufactures	Mineral industries only						
79	44	11	9	10	52	19	4	9	27	20	32	1
95	57	11	17	10	57	22	9	9	27	27	36	2
98	60	11	20	10	57	22	9	9	27	33	35	3
76	(NA)	5	21	20	30	(NA)	7	8	(1)	10	126	4
22	22	9	2	1	10	10	6	6	17	8	22	5
5,021	2,481	126	974	428	3,519	1,193	34,655	4,435	1,200	1,402	15,247	6
71,355	(NA)	7284	334	7445	7292	(NA)	72,527	(7)	(1)	514	1 711,147	7
4,054	1,919	104	819	387	2,744	815	24,301	6,040	957	1,133	10,505	8
422	249	34	95	34	259	116	2,337	206	142	144	961	9
366	193	19	78	26	243	100	1,549	155	95	106	617	10
20	20	3	11	2	4	4	788	48	23	26	317	11
36	36	12	6	6	12	12	...	3	24	12	27	12
22	22	7	2	3	10	10	...	3	16	5	9	13
682	339	41	143	48	450	165	3,114	330	182	218	1,170	14
7665	...	792	160	7193	7220	(NA)	5 7888	(7)	(1)	225	1 73,059	15
9	9	1	8	...	...	...	215	52	...	10	...	16
517	174	9	119	28	361	76	...	67	91	170	321	17
15	15	1	8	2	4	4	49	117	1	17	13	18
141	141	30	8	18	85	85	2,850	94	90	21	836	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
3	3	...	2	...	1	1	25	4	2	26	7	21
2,700	1,721	146	520	106	1,928	1,071	22,189	2,715	753	916	9,108	22
1,278	704	80	274	58	866	380	6,540	734	340	455	2,569	23
103	103	6	76	7	14	14	4,649	343	137	188	1,747	24
11	11	...	...	11	...	...	...	...	12223	...	...	25
	124	19	53	6		80	12 6,249	12 1,467	...	161		26
	...	...	...	...		...	...	...	...	...		27
1,308	23	3	4	1	1,048	15	3,980	26	16	8	4,792	28
	89	...	...	...		89	...	64	...	...		29
	71	5	15	8		43	177	29	24	21		30
	28	2	2	...		24	594	52	13	...		31
	568	31	96	15		426	(12)	(12)	(12)	83		32
	897	41	222	5		629	2,878	286	38	57		33
	1,249	79	237	5		928	3,524	3,529	71	61		34
	12	...	12	...		...	280	3,033	2	11		35
	343	38	5	...		300	116	11	31	...		36
	2	...	2	...		...	...	139	1	2		37
	801	14	211	5		571	3,128	338	22	37		38
	91	27	7	...		57	...	8	15	11		39
(NA)					(NA)						(NA)	
	20	4	8	2		7	80	12	9	6		40
	104	211	103	59		69	52	77	98	57		41
	15	2	7	2		4	55	7	8	6		42
	5	2	1	...		3	25	5	1	...		43
	...	...	...	...		...	32	...	...	...		44
	106	3	6	2		95	2,849	97	16	7		45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
	...	...	...	...		...	...	...	...	...		48
	5	1	1	(15)		3	1,643	5	5	1		49
	258	...	...	...		258	...	246	...	...		50
	2	(15)	(15)	...		2	68	5	1	...		51
(NA)	(15)	...	(15)	...	(NA)	...	152	10	...	...	(NA)	52
	3	...	...	2		3	5,503	224	27	1		53
	0.01	...	...	0.08		0.03	3.55	1.45	0.28	0.01		54

[8]Includes data for 1 slate quarry and 1 marble quarry. [9]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figurs is shown for these industries. [10]Includes man-hours worked on floating equipment. [11]See table 1, footnote 9. [12]Figures for cost of contract work are included with cost of supplies. [13]See table 1, footnote 13. [14]Not shown since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers. [15]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
California, all mineral operations:									
Including operations in manufactures	2,254	[2]1,512,186	[2]1,329,505	30,159	9,945	60,630	142,350	63,754	[3]217,007
Mineral industries only:									
Including crude petroleum and natural gas extraction	2,190	[2]1,494,686	[2]1,315,181	29,423	9,943	59,159	139,397	63,747	216,985
Excluding crude petroleum and natural gas extraction	1,222	[2]191,067	[2]144,531	9,158	2,687	19,411	41,349	14,306	20,187
Metal mining and Lignite, total	662	[2]46,713	[2]31,893	2,407	449	5,609	10,742	1,972	5,905
Lead and zinc ores	17	735	610	59	30	128	263	172	45
Copper ores and Gold and silver ores	186	8,496	5,759	974	117	2,354	3,787	604	946
Other metal mining and Lignite	459	[2]37,482	[2]25,524	1,374	302	3,127	6,692	1,196	4,914
Crude petroleum and natural gas extraction, total	968	1,303,619	[4]1,170,650	20,265	7,256	39,748	98,048	49,441	196,798
Crude petroleum and Natural gas[5]	635	1,081,525	1,012,679	11,091	6,003	21,979	53,728	40,396	184,108
Natural gas liquids	72	113,924	([4])	1,791	310	3,546	8,990	2,180	4,770
Oil and gas field contract services[6]	261	108,170	73,316	7,383	943	14,223	35,330	6,865	7,920
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	624	161,854	126,962	7,487	2,240	15,273	33,560	12,341	[3]14,304
Mineral industries only	560	144,354	112,638	6,751	2,238	13,802	30,607	12,334	14,282
Dimension stone:									
Including operations in manufactures	15	557	455	62	3	132	232	9	26
Mineral industries only	7	200	134	26	1	57	101	2	4
Crushed and broken stone (including operations in manufactures)	106	32,587	25,342	1,593	147	3,290	7,058	810	(NA)
Sand and gravel	300	66,750	54,175	2,944	868	6,155	14,354	4,355	3,631
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	95	5,021	4,054	366	20	682	1,278	103	(NA)
Mineral industries only	57	2,481	1,919	193	20	339	704	103	1,158
Chemical and fertilizer mineral mining	18	39,090	30,341	1,704	836	3,444	7,274	4,992	7,045
Nonmetallic minerals (except fuels) contract services and Miscellaneous nonmetallic minerals (except fuels) (including operations in manufacturea)	90	17,881	12,595	818	366	1,570	3,364	2,072	[3]1,149
COUNTY									
Alameda (mineral industries only)	23	(NA)	(NA)	[7]427	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	19	7,651	6,291	377	38	787	2,006	225	564
Sand and gravel	14	7,113	5,935	333	38	703	1,810	225	547
Amador (mineral industries only)	13	171	109	24	2	37	62	4	820
Butte:									
Including crude petroleum and natural gas	16	(NA)	(NA)	[7]132	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	13	973	861	52	53	113	267	237	62
Sand and gravel	6	908	781	39	47	84	217	224	35
Calaveraa (mineral induatries only)	16	382	233	41	5	77	142	14	137
Contra Costa (mineral induatriea only)	16	[8]2,678	[8]2,207	[7]172	([7])	[8]335	[8]741	[8]118	[8]306
Sand and gravel	6	619	419	34	2	56	126	13	165
Del Norte, total	39	418	364	36	2	72	167	4	52
Metal mining	34	297	268	24	2	44	115	4	52
Nonmetallic minerala except fuela	5	121	96	12	...	28	52	...	...
El Dorado, total:									
Including operations in manufactures	24	1,449	1,124	102	17	230	403	66	[3]95
Mineral industriea only	21	1,299	994	83	17	191	333	66	88
Metal mining only	14	395	308	25	6	73	123	7	60

See footnotea at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
El Dorado—Continued									
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	10	1,054	816	77	9	157	280	59	[3]35
Mineral industries only	7	904	686	58	9	118	210	59	28
Fresno (mineral industries only), total:									
Including crude petroleum and natural gas	73	(NA)	(NA)	[7]912	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	33	7,237	6,388	[7]291	([7])	519	[7]1,281	([7])	225
Metal mining	13	539	350	[7]38	([7])	64	[7]130	([7])	83
Crude petroleum and natural gas, extraction, total	44	(NA)	(NA)	[7]755	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[9]	40	(NA)	(NA)	[7]621	([7])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	4	5,281	4,817	123	11	248	629	71	92
Nonmetallic minerals (except fuels) mining	16	1,417	1,221	111	8	207	424	27	50
Sand and gravel	11	1,176	1,035	95	6	170	345	24	25
Glenn:									
Including crude petroleum and natural gas	12	(NA)	(NA)	[7]43	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	9	312	223	18	8	23	71	16	41
Sand and gravel	4	248	160	13	2	26	53	5	11
Humboldt	10	[8]631	[8]569	[7]37	([7])	[8]60	[8]129	[8]7	[8]66
Sand and gravel	6	608	511	27	...	51	111	...	14
Imperial (mineral industries only), total	38	1,235	956	70	5	136	231	6	126
Metal mining	24	834	645	[7]41	([7])	83	[7]120	([7])	84
Nonmetallic minerals (except fuels) mining	14	401	311	[7]34	([7])	53	[7]117	([7])	42
Sand and gravel	6	251	188	[7]20	([7])	29	[7]68	([7])	14
Inyo, total	128	16,766	8,308	538	197	1,312	3,074	770	543
Metal mining	97	15,138	7,000	408	173	1,062	2,543	632	412
Nonmetallic minerals (except fuels) mining	31	1,628	1,308	130	24	250	531	138	131
Kern, total:									
Including crude petroleum and natural gas	351	(NA)	(NA)	[7]6,558	([7])	(NA)	(NA)	(NA)	(NA)
Excluding petroleum and natural gas	88	[2]43,960	[2]39,716	1,007	166	1,952	4,615	1,045	1,392
Metal mining	48	[2]363	[2]221	51	4	84	151	30	137
Gold and silver ores	12	261	117	25	...	46	77	...	12
Ferro-alloy ores, except vanadium	29	102	104	18	1	27	49	9	56
Crude petroleum and natural gas extraction, total	279	(NA)	(NA)	[7]5,895	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[9]	263	(NA)	(NA)	[7]5,385	([7])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	16	33,291	31,825	421	89	836	2,112	549	796
Nonmetallic minerals (except fuels) mining	24	10,303	7,633	535	73	1,032	2,352	466	459
Sand and gravel	9	835	709	56	13	99	233	71	84
Kings	17	(NA)	(NA)	[7]507	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas extraction[9]	13	(NA)	(NA)	[7]500	([7])	(NA)	(NA)	(NA)	(NA)
Lake	13	740	727	66	...	117	268	1	77
Los Angeles (including operations in manufactures):									
Including crude petroleum and natural gas	392	(NA)	(NA)	[7]7,998	([7])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Los Angeles (including operations in manufactures)—Continued									
Excluding crude petroleum and natural gas:									
Including operations in manufactures	101	56,560	[2]50,157	1,418	432	2,981	7,182	2,413	[3]3,142
Mineral industries only	87	[2]53,890	[2]47,879	1,294	432	2,733	6,730	2,413	3,142
Crude petroleum and natural gas extraction, total	316	(NA)	(NA)	[7]6,707	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[9]	291	(NA)	(NA)	[7]6,148	([7])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	25	29,504	27,785	486	73	964	2,440	600	2,058
Sand and gravel	37	19,365	16,838	599	292	1,353	3,225	1,575	608
Madera	16	[8]1,160	[8]1,111	[8]65	[8]5	[8]146	[8]252	[8]29	[8]121
Marin	4	1,594	1,280	77	11	162	364	71	126
Mariposa	18	[8]94	[8]141	27	2	49	81	3	[8]95
Merced	7	702	534	38	8	76	197	20	27
Modoc	5	182	143	16	...	31	68	1	42
Mono	20	2,581	1,977	161	27	377	874	182	409
Monterey (mineral industries only):									
Including crude petroleum and natural gas	20	(NA)	(NA)	[7]271	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	12	2,678	2,104	109	19	241	515	115	111
Napa	12	1,524	1,133	105	10	193	407	40	20
Nevada	13	[2]1,987	[2]1,380	335	39	806	1,248	229	89
Orange:									
Including crude petroleum and natural gas	76	(NA)	(NA)	[7]2,188	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	34	16,547	15,510	364	61	751	1,820	433	686
Crude petroleum and natural gas extraction, total	50	(NA)	(NA)	[7]1,990	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[9]	42	(NA)	(NA)	[7]1,763	([7])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	8	12,880	12,353	206	21	412	1,064	179	515
Sand and gravel	15	3,257	2,804	124	31	270	654	197	147
Clay, ceramic, and refractory minerals	4	203	164	28	6	55	74	31	17
Placer (mineral industries only)	16	253	219	17	3	35	60	10	43
Riverside:									
Including operations in manufactures	43	[2]17,311	[2]14,627	557	78	1,154	2,301	476	(NA)
Mineral industries only	39	[2]16,388	[2]13,841	479	78	999	2,026	476	3,207
Ferro-alloy ores, except vanadium	12	451	385	55	5	139	209	20	61
Sand and gravel	7	1,334	1,011	66	26	135	297	114	150
Sacramento (mineral industries only), total:									
Including crude petroleum and natural gas extraction	39	(NA)	(NA)	[7]556	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas extraction	32	9,068	6,823	417	53	978	1,973	290	253
Placer gold	16	(D)	(D)	173	20	(D)	(D)	(D)	(D)
Crude petroleum and natural gas extraction[9]	7	(NA)	(NA)	[7]86	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	16	(D)	(D)	244	33	(D)	(D)	(D)	(D)
San Benito (mineral industries only)	14	[10]2,921	[10]2,062	191	60	[10]403	[10]820	288	[10]203
San Bernardino (mineral industries only)	112	[2] [10]35,006	[2] [10]24,478	1,632	723	[10]3,293	[10]6,816	4,019	[10]3,989
Metal mining	63	[2]1,234	[2]840	[11]109	6	194	391	28	216
Ferro-alloy ores, except vanadium	42	1,119	753	88	6	159	328	26	196
Nonmetallic minerals (except fuels) mining	47	33,772	23,638	1,523	717	3,099	6,425	3,991	3,773
Crushed and broken stone	8	2,248	1,580	130	7	259	512	41	263
Sand and gravel	11	4,272	2,965	164	112	331	764	536	258

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
San Diego (mineral industries only)	37	5,290	4,137	357	105	706	1,536	438	564
Nonmetallic minerals (except fuels) mining	28	5,244	4,081	354	105	700	1,522	438	530
Sand and gravel	20	4,438	3,464	290	99	558	1,288	416	512
San Francisco	4	(NA)	(NA)	[7]148	([7])	(NA)	(NA)	(NA)	(NA)
San Joaquin (mineral industries only)	13	[10]2,037	[10]1,699	104	13	[10]223	[10]512	[10]62	[10]38
Sand and gravel	7	1,931	1,638	89	7	200	466	34	37
San Luis Obispo (mineral industries only), total:									
Including crude petroleum and natural gas	44	(NA)	(NA)	[7]203	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	37	3,160	2,454	95	22	174	373	159	155
Metal mining	23	1,333	807	54	3	94	178	16	78
Ferro-alloy ores, except vanadium	15	1,185	707	31	4	63	119	22	74
Crude petroleum and natural gas[9]	13	(NA)	(NA)	[7]82	([7])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	8	1,897	1,647	41	23	80	195	143	77
San Mateo (mineral industries only)	5	1,233	1,017	59	6	122	345	12	56
Santa Barbara (mineral industries only), total:									
Metal mining and Nonmetallic minerals, including crude petroleum and natural gas extraction	53	(NA)	(NA)	[7]1,338	([7])	(NA)	(NA)	(NA)	(NA)
Metal mining and Nonmetallic minerals, excluding crude petroleum and natural gas extraction	18	16,060	11,834	575	173	1,116	2,544	1,000	1,442
Crude petroleum and natural gas[9]	35	(NA)	(NA)	[7]590	([7])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Bentonite and other mineral industries	18	16,060	11,834	575	173	1,116	2,544	1,000	1,442
Santa Clara (mineral industries only)	22	[8]1,134	[8]989	[7]67	([7])	126	[7]273	([7])	[8]86
Metal mining	9	118	125	11	...	20	29	...	28
Nonmetallic minerals (except fuels) mining	12	1,016	864	55	1	106	241	3	58
Santa Cruz (mineral industries only)	11	[8]1,015	[8]803	63	7	[8]130	[8]246	53	[8]60
Shasta (mineral industries only)	16	1,580	1,371	129	27	277	585	169	760
Sand and gravel	5	361	240	24	5	48	118	32	318
Sierra	22	486	382	80	12	193	314	68	81
Siskiyou, total	48	1,059	821	63	10	121	250	32	47
Metal mining	40	844	646	45	8	86	183	32	39
Nonmetallic minerals (except fuels) mining	8	215	175	18	2	35	67	...	8
Solano	9	[10]811	[10]621	[7]89	([7])	[10]84	[10]169	[10]23	[10]100
Sonoma	21	[8]2,942	[8]2,303	[7]107	([7])	[8]402	[8]872	[8]65	[8]74
Sand and gravel	10	1,662	1,303	87	8	181	406	37	38
Stanislaus	19	[8]872	[8]622	52	14	[8]94	[8]202	[8]79	[8]22
Sand and gravel	11	808	563	48	16	93	201	81	4
Tehama	7	[8]207	[8]170	[7]30	([7])	[8]38	[8]84	[8]7	[8]102
Trinity	26	404	287	[7]39	([7])	73	[7]135	([7])	46
Tulare (mineral industries only)	30	626	577	58	2	106	211	11	136
Tuolumne (mineral industries only)	8	224	181	[7]25	([7])	41	[7]94	([7])	10
Ventura, total:									
Including crude petroleum and natural gas	87	(NA)	(NA)	[7]2,392	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	18	20,435	18,801	327	83	692	1,547	469	705
Crude petroleum and natural gas extraction:									
Crude petroleum and natural gas[9]	69	(NA)	(NA)	[7]1,982	([7])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	8	17,474	16,712	171	31	332	831	201	548
Nonmetallic minerals (except fuels) mining	10	2,981	2,089	156	52	360	716	268	157
Yolo	7	[8]906	[8]796	66	6	[8]130	[8]352	25	[8]9
Yuba	9	2,681	1,615	195	26	503	797	148	10
Offshore	6	(NA)	(NA)	[7]273	([7])	(NA)	(NA)	(NA)	(NA)

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. [1]See table 1, footnote 4. [2]See table 1, footnote 5. [3]See table 1, footnote 13. [4]See table 2, footnote 9. [5]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. [6]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries. [7]Figures for "All other employees" are included with those for "Production and development workers." [8]Excludes data for 1 Crude petroleum or Natural gas establishment. [9]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity. [10]Excludes data for 2 Crude petroleum or Natural gas establishments. [11]Includes data for 2 Crude petroleum or Natural gas establishments.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	State and county	All mineral operations			Metal mining					
								Gold and silver ores		
		Total	Classified in mineral industries	Included in manufactures	Iron ores	Copper ores	Lead and zinc ores	Lode gold	Placer gold	Silver ores
1	California, total	2,254	2,190	64	2	18	17	93	73	2
2	Alameda	24	23	1	...	...	...	1	...	...
3	Alpine	5	5	...	...	...	...	...	...	...
4	Amador	14	13	1	...	1	...	4	3	...
5	Butte	16	16	...	...	...	...	...	6	...
6	Calaveras	18	16	2	...	...	...	7	4	...
7	Colusa	3	3	...	...	...	...	...	...	...
8	Contra Costa	17	16	1	...	...	...	...	...	...
9	Del Norte	39	39	...	...	...	...	...	...	...
10	El Dorado	24	21	3	...	3	...	5	1	...
11	Fresno	74	73	1	...	...	...	...	...	...
12	Glenn	12	12	...	...	...	...	...	...	...
13	Humboldt	10	10	...	...	1	...	...	...	...
14	Imperial	40	38	2	...	...	...	...	...	...
15	Inyo	128	128	...	...	...	12	7	...	1
16	Kern	351	351	...	...	...	...	11	...	1
17	Kings	17	17	...	...	...	...	...	...	...
18	Lake	13	13	...	...	...	...	...	...	...
19	Lassen	3	3	...	...	...	...	1	...	...
20	Los Angeles	392	378	14	...	...	...	1	1	...
21	Madera	16	16	...	...	1	...	...	2	...
22	Marin	4	4	...	...	...	...	...	...	...
23	Mariposa	18	18	...	...	...	...	8	...	...
24	Mendocino	4	4	...	...	...	...	...	...	...
25	Merced	7	7	...	...	...	...	...	...	...
26	Modoc	5	5	...	...	...	...	...	...	...
27	Mono	20	20	...	...	...	...	5	...	...
28	Monterey	21	20	1	...	...	...	1	...	...
29	Napa	12	12	...	...	...	...	...	...	...
30	Nevada	13	13	...	...	1	...	4	6	...
31	Orange	76	76	...	...	...	1	...	...	...
32	Placer	18	16	2	...	...	...	1	6	...
33	Plumas	13	13	...	...	2	...	3	2	...
34	Riverside	43	39	4	1	1	...	1	...	...
35	Sacramento	41	39	2	...	...	...	...	16	...
36	San Benito	16	14	2	...	...	...	...	...	...
37	San Bernardino	114	112	2	1	4	4	9	...	...
38	San Diego	39	37	2	...	...	...	...	...	...
39	San Francisco	4	4	...	...	...	...	...	...	...
40	San Joaquin	15	13	2	...	...	...	...	...	...
41	San Luis Obispo	48	44	4	...	...	...	...	...	...
42	San Mateo	9	5	4	...	...	...	...	...	...
43	Santa Barbara	54	53	1	...	...	...	...	...	...
44	Santa Clara	25	22	3	...	...	...	...	...	...
45	Santa Cruz	14	11	3	...	...	...	...	...	...
46	Shasta	18	16	2	...	1	...	2	2	...
47	Sierra	22	22	...	...	...	...	11	11	...
48	Siskiyou	48	48	...	...	1	...	5	5	...
49	Solano	9	9	...	...	...	...	...	2	...
50	Sonoma	21	21	...	...	...	...	...	...	...
51	Stanislaus	19	19	...	...	...	...	...	...	...
52	Sutter	3	3	...	...	...	...	...	...	...
53	Tehama	7	7	...	...	...	...	...	...	...
54	Trinity	26	26	...	...	2	...	4	3	...
55	Tulare	34	30	4	...	...	...	...	...	...
56	Tuolumne	9	8	1	...	...	...	1	...	...
57	Ventura	87	87	...	...	...	...	...	...	...
58	Yolo	7	7	...	...	...	...	...	...	...
59	Yuba	9	9	...	...	...	...	1	3	...
60	Offshore	6	6	...	...	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Metal mining--Continued										Crude petroleum and natural gas extraction			
Ferro-alloy ores, except vanadium				Metal mining contract services	Miscellaneous metal ores				Lignite				
Manganese ores	Tungsten ores	Chromium ores	Nickel ores		Mercury ores	Titanium ores	Uranium-radium-vanadium ores	Metallic ores, n.e.c.		Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	
66	210	115	1	7	42	1	13	1	1	635	72	261	1
...	...	...	...	...	...	...	1	...	...	2	...		2
...	4	...	...	...	...	...	...	...	...	...	...		3
...	...	...	...	...	...	...	...	...	1	...	...		4
...	...	1	...	...	...	...	...	...	...	3	...		5
...	1	...	...	...	...	...	...	...	...	...	...		6
...	...	1	...	...	...	...	...	...	...	1	...		7
...	...	...	...	...	5	...	...	...	...	1	...		8
...	...	32	...	...	2	...	...	...	...	...	...		9
...	2	3	...	...	...	...	...	...	...	...	...		10
...	9	3	...	...	1	...	...	...	...	40	4		11
...	...	5	...	...	...	...	...	...	...	3	...		12
...	...	1	...	...	...	...	...	...	...	1	...		13
21	2	...	...	1	...	...	...	...	...	...	...		14
1	74	...	...	2	...	...	...	...	...	...	...		15
...	29	...	...	...	...	...	7	...	...	263	16		16
...	2	...	...	...	...	...	...	...	...	10	3		17
1	...	2	...	...	5	...	...	...	...	...	...		18
...	...	...	...	...	...	...	...	...	...	...	...		19
...	1	...	...	1	...	1	1	...	...	291	25		20
...	5	...	...	...	...	...	...	...	...	1	...		21
...	...	...	...	...	...	...	...	...	...	...	...		22
...	4	...	...	...	...	...	...	...	...	1	...		23
1	...	...	...	...	...	...	...	...	...	...	...		24
...	...	...	...	...	...	...	...	...	...	...	...		25
...	...	...	...	...	...	...	...	...	...	...	...		26
...	9	...	...	...	...	...	...	...	...	...	...		27
1	...	...	...	...	...	...	...	...	...	8	...		28
...	...	4	...	...	3	...	...	...	...	...	...		29
...	...	...	...	...	...	...	1	...	...	...	...		30
...	...	...	...	...	...	...	...	1	...	42	8	(NA)	31
...	...	1	...	...	...	...	...	...	...	...	...		32
2	1	1	...	...	...	...	...	...	...	...	...		33
11	1	...	...	...	...	...	1	...	...	...	...		34
...	...	...	...	...	...	...	...	...	...	7	...		35
...	...	1	...	...	7	...	...	...	...	2	...		36
13	29	...	...	1	...	...	2	...	...	2	...		37
...	8	...	1	...	...	...	...	...	...	...	...		38
...	...	...	...	...	...	...	...	...	...	4	...		39
1	...	...	...	...	...	...	...	...	...	2	...		40
5	...	10	...	2	6	...	...	...	...	13	1		41
...	...	...	...	...	...	...	...	...	...	...	...		42
...	...	2	...	...	...	...	...	...	...	35	7		43
...	...	1	...	...	8	...	...	...	...	1	...		44
...	...	...	...	...	...	...	...	...	...	1	...		45
...	...	4	...	...	...	...	...	...	...	...	...		46
...	...	...	...	...	...	...	...	...	...	...	...		47
...	...	28	...	...	...	...	...	...	...	...	...		48
...	...	...	...	...	...	...	...	...	...	2	...		49
...	...	...	...	...	3	...	...	...	...	1	...		50
5	...	...	...	...	1	...	...	...	...	1	...		51
...	...	...	...	...	...	...	...	...	...	1	...		52
...	...	4	...	...	...	...	...	...	...	1	...		53
4	...	10	...	...	...	...	...	...	...	...	...		54
...	28	...	...	...	...	...	...	...	...	...	...		55
...	1	1	...	...	...	...	...	...	...	...	...		56
...	...	...	...	...	...	...	...	...	...	69	8		57
...	...	...	...	...	1	...	...	...	...	1	...		58
...	...	...	...	...	...	...	...	...	...	...	...		59
...	...	...	...	...	...	...	...	...	...	6	...		60

Table 4.—NUMBER OF MINERAL OPERATIONS,

	State and county	Nonmetallic minerals (except fuels) mining								
		Dimension stone							Crushed and broken stone (Limestone)	
		Limestone (included in manufactures)	Granite		Slate (included in manufactures)	Sandstone	Stone, n.e.c.			
			Classified in mineral industries	Included in manufactures			Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures[3]
1	California, total	1	3	4	2	2	2	1	22	14
2	Alameda	...	...	...	...	...	...	...	...	...
3	Alpine	...	...	...	...	...	...	...	...	...
4	Amador	...	...	...	...	...	...	...	...	...
5	Butte	...	...	...	...	...	...	...	...	...
6	Calaveras	...	...	...	...	...	...	...	...	1
7	Colusa	...	...	...	...	...	...	...	...	...
8	Contra Costa	...	...	...	...	...	...	...	...	...
9	Del Norte	...	...	...	...	...	...	...	...	...
10	El Dorado	...	...	...	1	...	...	1	3	1
11	Fresno	...	1	...	...	...	...	...	1	...
12	Glenn	...	...	...	...	...	...	...	...	...
13	Humboldt	...	...	...	...	...	...	...	1	...
14	Imperial	...	...	...	...	...	...	...	...	...
15	Inyo	...	...	...	...	...	...	...	...	...
16	Kern	...	...	...	...	...	...	...	...	...
17	Kings	...	...	...	...	...	...	...	...	...
18	Lake	...	...	...	...	...	...	...	...	...
19	Lassen	...	...	...	...	...	...	...	...	...
20	Los Angeles	...	...	...	1	...	1	...	...	1
21	Madera	...	1	...	...	...	...	...	...	...
22	Marin	...	...	...	...	...	...	...	...	...
23	Mariposa	...	...	...	...	...	...	...	...	...
24	Mendocino	...	...	...	...	...	...	...	...	...
25	Merced	...	...	...	...	...	...	...	...	...
26	Modoc	...	...	...	...	...	...	...	...	...
27	Mono	...	...	...	...	...	...	...	...	...
28	Monterey	...	...	...	...	1	...	...	...	1
29	Napa	...	...	...	...	...	...	...	...	...
30	Nevada	...	...	...	...	...	...	...	...	...
31	Orange	...	...	...	...	...	...	...	...	...
32	Placer	...	...	1	...	...	...	...	...	...
33	Plumas	...	...	...	...	...	...	...	1	...
34	Riverside	...	...	...	...	...	...	...	1	...
35	Sacramento	...	...	...	...	...	...	...	...	...
36	San Benito	...	...	...	...	...	...	...	1	1
37	San Bernardino	...	...	...	...	...	1	...	5	2
38	San Diego	...	1	2	...	...	...	...	...	...
39	San Francisco	...	...	...	...	...	...	...	...	...
40	San Joaquin	...	...	...	...	...	...	...	...	...
41	San Luis Obispo	...	...	...	...	...	...	...	1	...
42	San Mateo	...	...	1	...	...	...	...	1	2
43	Santa Barbara	1	...	...	...	...	...	...	...	...
44	Santa Clara	...	...	...	...	...	...	...	1	1
45	Santa Cruz	...	...	...	...	...	...	...	3	1
46	Shasta	...	...	...	...	...	...	...	1	2
47	Sierra	...	...	...	...	...	...	...	...	...
48	Siskiyou	...	...	...	...	...	...	...	...	...
49	Solano	...	...	...	...	...	...	...	...	...
50	Sonoma	...	...	...	...	1	...	...	...	...
51	Stanislaus	...	...	...	...	...	...	...	...	...
52	Sutter	...	...	...	...	...	...	...	...	...
53	Tehama	...	...	...	...	...	...	...	...	...
54	Trinity	...	...	...	...	...	...	...	...	...
55	Tulare	...	...	...	...	...	...	...	...	...
56	Tuolumne	...	...	...	...	...	...	...	1	1
57	Ventura	...	...	...	...	...	...	...	1	...
58	Yolo	...	...	...	...	...	...	...	...	...
59	Yuba	...	...	...	...	...	...	...	...	...
60	Offshore	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954—Continued

Nonmetallic minerals (except fuels) mining—Continued													
Crushed and broken stone—Continued						Sand and gravel			Clay, ceramic, and refractory minerals				
Granite		Marble	Trap rock	Sandstone	Stone, n.e.c.	Common sand and gravel	Glass sand	Foundry sand	Bentonite	Fire clay		Fuller's earth	
Classified in mineral industries	Included in manufactures[3]									Classified in mineral industries	Included in manufactures		
22	2	1	15	11	19	288	4	8	9	15	2	2	1
...	...	...	1	2	1	14	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	1	...	1	...	...	1	1	...	4
...	...	...	...	...	...	6	...	...	...	...	...	...	5
...	...	...	...	...	1	3	...	...	...	...	...	...	6
...	...	...	...	...	...	1	...	...	...	...	...	...	7
...	...	...	1	2	...	5	...	1	...	...	...	...	8
...	...	...	1	...	...	4	...	...	...	...	...	...	9
...	...	...	...	...	...	2	...	...	...	...	...	...	10
...	...	...	1	...	...	11	...	...	...	...	...	...	11
...	...	...	...	...	...	4	...	...	...	...	...	...	12
...	...	...	...	...	...	6	...	...	...	...	...	...	13
...	...	...	...	...	1	6	...	...	4	...	...	...	14
...	...	...	...	1	1	1	...	...	...	...	...	2	15
2	...	...	...	...	1	9	...	...	...	...	...	...	16
...	...	...	...	...	...	...	...	...	...	...	...	...	17
...	...	...	...	...	...	4	...	...	...	...	...	...	18
...	...	...	...	...	...	1	...	...	...	...	...	...	19
8	...	...	1	...	3	33	...	3	...	...	...	...	20
...	...	...	...	...	...	5	...	...	...	...	...	...	21
...	...	...	1	2	...	...	...	...	...	...	...	...	22
...	...	...	...	...	...	3	...	...	...	...	...	...	23
...	...	...	...	...	...	3	...	...	...	...	...	...	24
...	...	...	...	...	...	6	...	...	...	...	...	...	25
...	...	...	1	...	...	1	...	...	...	...	...	...	26
...	...	...	...	...	...	1	...	...	...	...	...	...	27
1	...	...	...	...	...	6	2	...	...	...	...	...	28
...	...	...	...	...	1	2	...	...	...	...	...	...	29
1	...	...	...	...	...	...	...	...	...	...	...	...	30
1	...	...	...	1	1	13	...	2	...	1	...	...	31
...	...	...	...	...	...	4	...	...	...	3	...	...	32
1	...	...	...	...	...	...	...	...	...	...	...	...	33
3	2	...	...	1	1	6	1	...	...	8	...	...	34
...	...	...	...	...	...	15	...	...	...	1	1	...	35
1	...	...	...	...	...	...	...	...	1	...	...	...	36
1	...	...	...	2	...	11	...	...	4	...	...	...	37
2	...	...	1	...	...	20	...	...	...	...	...	...	38
...	...	...	...	...	...	...	...	...	...	...	...	...	39
...	...	...	...	...	...	7	...	...	...	...	...	...	40
...	...	...	...	...	...	3	...	1	...	...	...	...	41
...	...	...	1	...	...	3	...	...	...	...	...	...	42
...	...	...	...	...	...	3	...	...	...	...	...	...	43
1	...	...	...	...	4	5	...	...	...	...	...	...	44
...	...	...	...	...	...	7	...	...	...	...	...	...	45
...	...	...	...	...	...	5	...	...	...	...	...	...	46
...	...	...	...	...	...	...	...	...	...	...	...	...	47
...	...	...	...	...	...	4	...	...	...	...	...	...	48
...	...	...	2	...	...	2	...	...	...	...	...	...	49
...	...	...	2	...	2	10	...	...	...	...	...	...	50
...	...	...	...	...	...	11	...	...	...	1	...	...	51
...	...	...	1	...	...	1	...	...	...	...	...	...	52
...	...	...	...	...	...	2	...	...	...	...	...	...	53
...	...	...	1	...	...	2	...	...	...	...	...	...	54
...	...	...	...	...	...	2	...	...	...	...	...	...	55
...	...	1	...	...	1	2	...	...	...	...	...	...	56
...	...	...	...	...	...	4	...	1	...	...	...	...	57
...	...	...	...	...	...	5	...	...	...	...	...	...	58
...	...	...	...	...	...	4	...	...	...	...	...	...	59
...	...	...	...	...	...	...	...	...	...	...	...	...	59
...	...	...	...	...	...	...	...	...	...	...	...	...	60

Table 4.—NUMBER OF MINERAL OPERATIONS,

	State and county	Nonmetallic minerals (except fuels) mining—Continued								
		Clay, ceramic, and refractory minerals—Continued						Natural abrasives, except sand, n.e.c.	Chemical and fertilizer mineral mining	
		Kaolin and ball clay		Feldspar	Magnesite and brucite	Clay, ceramic, and refractory minerals, n.e.c.			Barite	Fluorspar
		Classified in mineral industries	Included in manufactures			Classified in mineral industries	Included in manufactures			
1	California, total	7	1	1	1	22	35	3	2	2
2	Alameda	...	...	...	...	1	1	...	...	...
3	Alpine	...	...	...	...	...	...	...	...	...
4	Amador	...	...	...	...	1	...	...	...	...
5	Butte	...	...	...	...	...	...	...	...	...
6	Calaveras	...	...	...	...	...	1	...	...	...
7	Colusa	...	...	...	...	...	...	...	...	...
8	Contra Costa	...	...	...	...	...	1	...	...	...
9	Del Norte	...	...	...	...	...	...	...	...	...
10	El Dorado	...	...	...	...	...	...	...	...	...
11	Fresno	...	...	...	...	...	1	...	...	...
12	Glenn	...	...	...	...	...	...	...	...	...
13	Humboldt	...	...	...	...	...	...	...	...	...
14	Imperial	...	...	...	...	...	1	...	...	...
15	Inyo	...	...	...	...	...	...	1	...	1
16	Kern	1	...	...	...	2	...	1	...	...
17	Kings	...	...	...	...	...	...	...	...	...
18	Lake	...	...	...	...	...	...	...	...	...
19	Lassen	...	...	...	...	...	...	...	...	...
20	Los Angeles	...	1	...	...	2	11	1	...	...
21	Madera	...	...	...	...	...	...	...	...	...
22	Marin	...	...	...	...	1	...	...	...	...
23	Mariposa	...	...	...	...	...	...	...	1	...
24	Mendocino	...	...	...	...	...	...	...	...	...
25	Merced	...	...	.	...	...	...	...	...	...
26	Modoc	...	...	...	...	...	...	...	...	...
27	Mono	1	...	...	...	...	...	...	...	...
28	Monterey	...	...	...	...	...	...	...	...	...
29	Napa	...	...	...	...	...	...	...	...	...
30	Nevada	...	...	...	...	...	...	...	...	...
31	Orange	2	...	...	...	1	...	...	...	...
32	Placer	...	...	...	...	...	1	...	...	...
33	Plumas	...	...	...	...	...	...	...	...	...
34	Riverside	...	...	...	...	1	1	...	...	...
35	Sacramento	...	...	...	...	...	1	...	...	...
36	San Benito	...	...	...	...	...	1	...	...	...
37	San Bernardino	3	...	1	...	1	...	...	1	1
38	San Diego	...	...	...	...	1	...	...	...	...
39	San Francisco	...	...	...	...	...	...	...	...	...
40	San Joaquin	...	...	...	...	3	2	...	...	...
41	San Luis Obispo	...	...	...	...	...	4	...	...	...
42	San Mateo	...	...	...	...	...	1	...	...	...
43	Santa Barbara	...	...	...	...	2	...	...	...	...
44	Santa Clara	...	...	...	1	...	2	...	...	...
45	Santa Cruz	...	...	...	...	...	2	...	...	...
46	Shasta	...	...	...	...	...	...	...	...	...
47	Sierra	...	...	...	...	...	...	...	...	...
48	Siskiyou	...	...	...	...	...	...	...	...	...
49	Solano	...	...	...	...	1	...	...	...	...
50	Sonoma	...	...	...	...	2	...	...	...	...
51	Stanislaus	...	...	...	...	...	...	...	...	...
52	Sutter	...	...	...	...	...	...	...	...	...
53	Tehama	...	...	...	...	...	...	...	...	...
54	Trinity	...	...	...	...	...	...	...	...	...
55	Tulare	...	...	...	...	...	4	...	...	...
56	Tuolumne	...	...	...	...	...	...	...	...	...
57	Ventura	...	...	...	...	2	...	...	...	...
58	Yolo	...	...	...	...	...	...	...	...	...
59	Yuba	...	...	...	...	1	...	...	...	...
60	Offshore	...	...	...	...	...	...	...	...	...

NA Not available. [1]See table 3, footnote 5, and for counties footnote 9. [2]See table 3, footnote 6. [3]For Limestone includes 1 quarry operated as part of a wholesale trade establishment and for Granite 2 quarries operated as part of wholesale trade establishments.

BY INDUSTRY AND COUNTY: 1954—Continued

Nonmetallic minerals (except fuels) mining—Continued												
Chemical and fertilizer mineral mining—Con.				Nonmetallic minerals (except fuels) mining contract services	Miscellaneous nonmetallic minerals (except fuels)							
					Gypsum		Mica	Pumice and pumicite	Talc, soapstone, and pyrophyllite	Peat	Nonmetallic minerals, n.e.c.	
Potash, soda and borate minerals	Rock salt	Sulfur	Chemical and fertilizer mineral mining, n.e.c.		Classified in mineral industries	Included in manufactures						
9	1	2	2	2	11	2	1	27	27	4	13	1
...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	1	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	...	1	...	8
...	...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	...	...	2	...	...	10
...	...	...	...	...	...	...	...	2	...	...	...	11
...	...	...	...	...	...	...	...	...	...	...	...	12
...	...	...	...	...	...	...	...	...	...	...	...	13
...	...	...	...	...	1	1	1	1	...	...	...	14
4	...	...	...	1	...	...	...	6	12	...	1	15
3	...	...	...	...	3	...	...	2	...	...	...	16
...	...	...	...	...	2	...	...	...	...	...	...	17
...	...	1	...	...	...	...	...	...	...	...	...	18
...	...	...	...	...	...	...	...	1	...	...	...	19
...	...	...	1	1	...	...	...	1	...	...	1	20
...	...	...	...	...	...	...	...	1	...	...	...	21
...	...	...	...	...	...	...	...	...	...	...	...	22
...	...	...	...	...	...	...	...	1	...	...	...	23
...	...	...	...	...	...	...	...	...	...	...	...	24
...	...	...	...	...	1	...	...	...	...	...	...	25
...	...	...	...	...	...	...	...	2	...	1	...	26
...	...	...	...	...	...	...	...	3	1	...	...	27
...	...	...	...	...	...	...	...	...	...	...	...	28
...	...	...	...	...	...	...	...	...	...	...	2	29
...	...	...	...	...	...	...	...	...	...	...	...	30
...	...	...	...	...	...	...	...	...	...	2	...	31
...	...	...	...	...	...	...	...	...	...	...	1	32
...	...	...	...	...	...	...	...	...	...	...	...	33
...	...	...	...	...	...	1	...	...	1	...	...	34
...	...	...	...	...	...	...	...	...	...	...	...	35
...	...	...	...	...	...	...	...	...	...	...	1	36
2	1	...	...	...	...	...	...	2	10	...	1	37
...	...	...	...	...	...	...	...	...	1	...	2	38
...	...	...	...	...	...	...	...	...	...	...	...	39
...	...	...	...	...	...	...	...	...	...	...	...	40
...	...	...	...	...	2	...	...	...	...	...	...	41
...	...	...	...	...	...	...	...	...	...	...	...	42
...	...	...	...	...	...	...	...	...	...	...	4	43
...	...	...	...	...	...	...	...	...	...	...	...	44
...	...	...	...	...	...	...	...	...	...	...	...	45
...	...	...	1	...	...	...	...	...	...	...	...	46
...	...	...	...	...	...	...	...	...	...	...	...	47
...	...	...	...	...	...	...	...	5	...	...	...	48
...	...	...	...	...	...	...	...	...	...	...	...	49
...	...	...	...	...	...	...	...	...	...	...	...	50
...	...	...	...	...	...	...	...	...	...	...	...	51
...	...	...	...	...	...	...	...	...	...	...	...	52
...	...	...	...	...	...	...	...	...	...	...	...	53
...	...	...	...	...	...	...	...	...	...	...	...	54
...	...	...	...	...	...	...	...	...	...	...	...	55
...	...	...	...	...	...	...	...	...	...	...	...	56
...	...	...	...	...	2	...	...	...	...	...	...	57
...	...	...	...	...	...	...	...	...	...	...	...	58
...	...	...	...	...	...	...	...	...	...	...	...	59
...	...	...	...	...	...	...	...	...	...	...	...	60

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
California, all mineral operations:												
Including operations classified in manufactures	2,254	648	779	301	202	192	71	40	13	3	4	1
Mineral industries only	2,190	644	752	287	193	187	66	40	13	3	4	1
Metal mining, total	661	416	177	34	11	13	2	7	1	...	...	...
Iron ores	2	1	...	...	...	...	...	1	...	...	...	...
Copper ores	18	6	8	3	...	1	...	...	...	...	...	...
Lead and zinc ores:												
Lead ores	5	2	3	...	...	...	...	...	...	...	...	...
Lead-zinc ores:												
Valued chiefly for lead	10	5	2	2	...	...	1	...	...	...	...	...
Valued chiefly for zinc	2	1	1	...	...	...	...	...	...	...	...	...
Gold and silver ores:												
Lode gold	93	47	33	5	3	3	...	2	...	...	...	...
Placer gold	73	53	15	2	...	1	...	2	...	...	...	...
Silver ores	2	2	...	...	...	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Manganese ores	66	50	10	3	2	1	...	...	...	...	...	...
Tungsten ores	210	140	53	10	2	3	...	1	1	...	...	...
Chromium ores	115	75	31	5	3	1	...	...	...	...	...	...
Nickel ores	1	1	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	7	...	4	1	...	2	...	...	...	...	...	...
Miscellaneous metal ores:												
Mercury ores	42	27	9	2	1	1	1	1	...	...	...	...
Titanium ores	1	1	...	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	13	5	7	1	...	...	...	...	...	...	...	...
Miscellaneous metal ores	1	...	1	...	...	...	...	...	...	...	...	...
Lignite	1	...	1	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	968	138	369	151	114	114	36	30	9	3	3	1
Crude petroleum and Natural gas	635	137	304	88	38	36	8	13	4	3	3	1
Natural gas liquids	72	...	6	8	16	31	10	1	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	99	...	14	14	21	22	13	11	4	...	...	...
Building, repairing, and dismantling rigs and derricks	8	...	4	2	...	1	...	1	...	...	...	...
Oil and gas field contract services, n.e.c.	154	1	41	39	39	24	5	4	1	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	624	94	232	116	77	65	33	3	3	...	1	...
Mineral industries only	560	90	205	102	68	60	28	3	3	...	1	...
Dimension stone:												
Limestone (included in manufactures)	1	...	...	1	...	...	...	...	...	...	...	...
Granite:												
Classified in mineral industries	3	...	1	1	1	...	...	...	...	...	...	...
Included in manufactures	4	1	1	2	...	...	...	...	...	...	...	...
Slate (included in manufactures)	2	1	...	...	1	...	...	...	...	...	...	...
Sandstone	2	...	2	...	...	...	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	2	1	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	22	2	6	3	6	2	3	...	...	...	...	...
Included in manufactures[1]	14	...	3	1	2	3	5	...	...	...	...	...
Granite:												
Classified in mineral industries	22	1	9	7	...	4	1	...	...	...	...	...
Included in manufactures[1]	2	...	1	1	...	...	...	...	...	...	...	...
Marble	1	...	...	...	1	...	...	...	...	...	...	...
Trap rock	15	1	3	7	1	3	...	...	...	...	...	...
Sandstone	11	2	2	4	...	2	1	...	...	...	...	...
Stone, n.e.c.	19	1	11	3	1	...	3	...	...	...	...	...

See footnote at end of table.

Table 5.--NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954--Continued

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Nonmetallic minerals (except fuels) mining, total—Continued												
Sand and gravel:												
Common sand and gravel	288	36	95	57	42	42	15	1	...	...	...	...
Glass sand	4	...	...	1	1	1	1	...	...	...	...	...
Foundry sand	8	...	8	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	9	3	5	1	...	...	...	...	...	...	...	...
Fire clay:												
Classified in mineral industries	15	6	6	...	2	1	...	...	...	...	...	...
Included in manufactures	2	...	...	2	...	...	...	...	...	...	...	...
Fuller's earth	2	...	2	...	...	...	...	...	...	...	...	...
Kaolin and ball clay:												
Classified in mineral industries	7	3	3	...	...	1	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Feldspar	1	1	...	...	...	...	...	...	...	...	...	...
Magnesite and brucite	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	22	7	11	2	...	2	...	...	...	...	...	...
Included in manufactures	35	2	21	6	6	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	3	1	2	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Barite	2	1	1	...	...	...	...	...	...	...	...	...
Fluorspar	2	1	1	...	...	...	...	...	...	...	...	...
Potash, soda, and borate minerals	9	...	3	...	1	...	1	1	2	...	1	...
Rock salt	1	...	...	...	...	...	1	...	...	...	...	...
Sulfur	2	...	1	...	1	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	2	...	...	...	...	1	1	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	2	1	...	1	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels) mining:												
Gypsum:												
Classified in mineral industries	11	2	6	1	2	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	2	...	...	...	...	...	...
Mica	1	1	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	27	10	9	4	3	1	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	27	6	11	6	4	...	...	...	...	...	...	...
Peat	4	1	3	...	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c.	13	2	2	4	2	...	1	1	1	...	...	...

[1]For Limestone includes one operation included in wholesale trade and for Granite includes 2 operations in wholesale trade.

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Million gallons per production worker[3]	Gallons per dollar value added	Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons): Used	Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
California, total	29,423	1,315,181	32,432	1.10	25	[4]41,992	8,782	4,254	161,531	10	27	51	12
Metal mining and Lignite, total.	2,407	[5]31,893	5,077	2.11	159	[4]4,988	5,628	3,972	16,310	22	72	5	1
Copper, lead, zinc, gold, and silver ores	1,033	6,369	4,299	4.16	675	[4]4,275	5,352	2,104	14,902	25	74	1	...
Lead and zinc ores	59	610	19	0.32	31	15	...	...	22	...	...	100	...
Lode gold	515	2,418	1,169	2.27	483	1,150	3	2,104	1,176	92	7	1	...
Placer gold	396	3,043	3,089	7.80	1,015	([4])	5,349	([4])	13,682	...	100	([6])	...
Tungsten ores	657	10,180	570	([7])	56	559	275	1,842	915	3	76	15	6
Chromium ores	131	1,788	87	([7])	49	83	...	...	213	...	43	46	[8]11
Mercury ores	230	2,067	5	0.02	2	2	1	26	7	...	40	60	...
Other metal mining and Lignite	356	[5]11,489	116	0.33	10	69	...	...	273	15	2	83	...
Crude petroleum and natural gas extraction, total	20,265	[9]1,170,650	7,923	0.39	7	18,503	xxx	xxx	[10]119,468	22	([6])	68	10
Crude petroleum and Natural gas	11,091	1,012,679	5,250	0.47	5	16,727	xxx	xxx	(NA)	16	([6])	74	[8]10
Natural gas liquids	1,791	([9])	2,456	1.37	(NA)	273	xxx	xxx	114,001	35	([6])	62	3
Oil and gas field contract services	7,383	73,316	217	0.03	3	1,503	xxx	xxx	(NA)	1	([6])	2	[11]97
Nonmetallic minerals (except fuels) mining, total	6,751	112,638	19,432	2.88	173	18,501	3,154	282	25,753	3	25	57	15
Dimension stone	26	134	...	...	...	...	...	...	...	...	...	...	..
Crushed and broken stone, except marble:													
Limestone	311	4,109	38	0.12	9	22	45	137	83	...	26	53	21
Granite	209	2,823	20	0.10	7	14	69	69	89	...	100	...	...
Trap rock	144	1,338	138	0.96	103	136	...	...	138	...	...	64	[11]36
Sandstone	187	2,998	23	0.12	8	18	...	...	23	100	...	...	...
Stone, n.e.c	244	3,586	10	0.04	3	10	...	...	10	...	...	100	...
Sand and gravel:													
Common sand and gravel	2,844	51,890	13,212	4.65	255	12,671	2,946	...	18,688	2	37	39	[8]22
Glass sand and Foundry sand	100	2,285	193	2.13	90	165	...	...	453	100	...	...	...
Clay, ceramic, and refractory minerals:													
Bentonite and Fuller's earth	19	104	...	...	...	...	...	...	...	...	...	...	...
Fire clay, Kaolin and ball clay, Feldspar, and Magnesite and brucite	74	1,000	1	0.01	1	1	1	...	2	...	...	100	...
Clay, ceramic, and refractory minerals, n.e.c.	100	815	3	0.03	4	3	...	...	3	100	...	...	...
Chemical and fertilizer mineral mining:													
Potash, soda, and borate minerals	1,549	24,301	5,503	3.55	227	5,225	...	...	5,503	...	...	100	...
Other industries	155	6,040	151	0.97	25	118	73	76	601	...	9	91	([6])
Pumice and pumicite	95	957	(D)	(D)	(D)	7	20	...	27	...	86	14	...
Talc, soapstone, and pyrophyllite	106	1,133	(D)	(D)	(D)	1	...	...	1	...	...	100	...
Other industries	588	9,125	132	0.22	14	110	...	...	132	23	...	77	...

xxx Not applicable.
NA Not available.
D Withheld to avoid approximately disclosing data for individual companies.

[1]Excludes water used for flooding in oil and gas fields.

[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 1,610 million gallons of brackish water.

[3]For computations of water intake per production worker, including mine water used, see table 2.

[4] Due to the nature of placer gold operations, particularly the preponderant use of surface water systems such as creeks, other streams, and lakes in sluicing and washing, water discharge is approximately the same as water intake and drainage of mine water is negligible. The 1954 census report forms did not provide for information on water discharge or drainage for such operations, but in industry group and State totals a figure for water discharge equal to water intake has been included for placer gold operations.

[5]See table 1, footnote 5.

[6]Less than 0.5 percent.

[7]See table 2, footnote 14.

[8]Includes "not specified" as follows: for Chromium ores, 9 percent; for Crude petroleum and Natural gas, 2 percent; for Common sand and gravel, 19 percent.

[9]See table 2, footnote 9.

[10]For industries other than Natural gas liquids, includes water intake only.

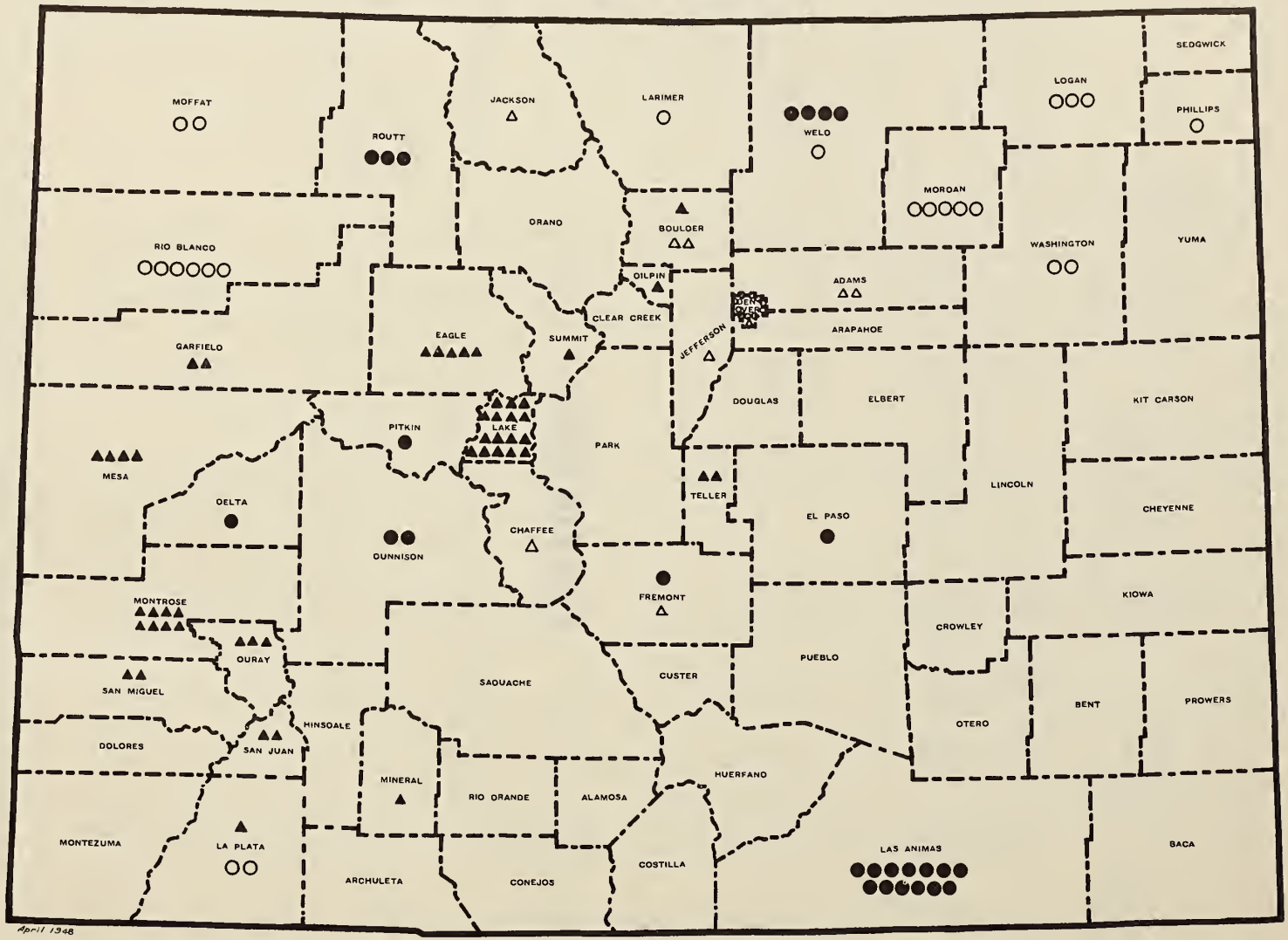
[11]Represents "not specified."

COLORADO

105-1

MINING IN COLORADO: 1954

Rank among States:
Employment, 16
Value of shipments, 14



April 1948

▲ METAL MINING
● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING

SCALE
10 0 10 20 MILES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING AND NONMETALLIC MINERALS (EXCEPT FUELS) MINING	$10,600
COAL MINING	5,100
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	26,400

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	1954	1939[1]	1929[2]	1919[3]	1909[3]	1902[4]
Number of operating companies	941	510	(NA)	(NA)	[5]1,010	[5]1,975
Number of establishments	1,043	(NA)	431	537	1,060	(NA)
Number of mines and quarries	768	563	466	586	2,989	1,998
Number of oil and gas wells producing at end of year	1,765	223	(NA)	70	76	80
Number of preparation plants	185	109	(NA)	(NA)	(NA)	(NA)
Value of shipments[6]....$1,000	[7]262,214	52,291	41,530	51,217	45,680	40,603
Value added in mining....do....	[7]207,541	41,875	32,205	35,632	29,579	31,588
Number of persons engaged, total	14,714	15,149	16,203	19,105	25,431	25,210
Production and development workers	10,977	13,469	15,099	17,268	22,612	[8]22,856
All other employees	2,713	1,331	[9]962	1,431	1,615	2,354
Proprietors and firm members	1,024	349	142	406	1,204	(NA)
Performing manual labor	649	267	(NA)	240	318	(NA)
Man-hours worked by production and development workers....1,000..	21,317	23,356	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000..	154,358	30,239	34,853	44,584	38,183	33,331
Wages of production and development workers....do....	44,381	16,845	23,075	26,042	19,663	21,215
Salaries of all other employees....do....	15,618	2,978	[9]2,453	2,957	2,419	3,101
Minerals received for preparation....do....	[7]3,355	(NA)	(NA)	4,282	5,959	(NA)
Supplies....do....	42,811	7,134	6,334	8,075	4,930	8,038
Fuel[10]....do....	4,307	854	718	1,310	2,067	
Purchased electric energy....do....	3,125	1,827	1,660	1,494		
Contract work....do....	40,761	601	613	424	3,145	977
Purchased machinery installed....do....	24,787		1,847	(NA)		
Capital expenditures, total....do....	56,479	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do....	27,302		4,460	5,197	(NA)	(NA)
Preparation plant construction....do....	3,953	465				
Other construction....do....	4,265		(NA)	(NA)		
New machinery and equipment....do....	18,814	1,503				
Used plant and equipment....do....	2,145	272				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000..	702	201	126	121	110	89
Per production worker	64	15	8	7	5	4
Prime movers....1,000..	518	69	35	48	83	82
Electric motors driven by purchased energy....do....	184	132	.91	73	27	7
Horsepower rating of electric motors driven by energy generated at establishment....do....	16	25	19	13	15	14
Energy used....million kwh equivalent..	4,873	2,113	2,329	(NA)		
Coal[11]....1,000 short tons..	75	228	290	413		
Fuel oils[11]....1,000 barrels..	410	26	3	5	(NA)	(NA)
Gas[11]....million cu.ft..	8,977	275	4	7		
Electric energy purchased....million kwh..	290	197	93	(NA)		
Electric energy generated and used....do....	24	22	17	(NA)		

NA Not available.

[1]Excludes data for dimension stone dressing plants, if any, operated in conjunction with 5 dimension stone quarries.

[2]Excludes data for the crude petroleum and natural gas extraction industries and common clay and shale operations. The value of products and services of such operations in 1939 was $1,607,000.

[3]Excludes data for sand, gravel, common clay, and shale operations. The value of products of such operations in 1939 was $576,000.

[4]Includes data for one cement plant and for lime plants producing lime valued at $46,000.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909)and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Excludes figures for the Uranium-radium-vanadium ores industry. Data on value of shipments and costs of minerals received for preparation were not obtained for this industry.

[8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[10]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[11]Includes data for fuels produced and used at the same establishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Colorado, total		Bituminous coal	Crude petroleum and natural gas extraction			
		Including operations classified in manufactures	Mineral industries only		Total	Crude petroleum and Natural gas	Drilling oil and gas wells contract services	Natural gas liquids and Oil and gas field contract services, n.e.c.
1	Number of operating companies	941	921	118	236	153	44	49
2	Number of establishments	1,043	1,020	127	247	154	44	49
	Number of mines, quarries, and producing oil and gas wells:							
3	1954	2,533	2,510	129	1,765	1,718	47	...
4	1939	786	(NA)	212	223	(NA)	(NA)	(NA)
5	Number of preparation plants	185	180	3	5	xxx	xxx	5
	Value of shipments:[1]							
6	1954....$1,000	[2]262,214	[2]258,895	15,983	158,289	127,536	22,328	8,425
7	1939....do	[3]52,291	(NA)	14,952	[4]1,458	1,391	[5]67	([5])
8	Value added in mining....do	[2]207,541	[2]204,547	13,480	[6]125,468	107,149	11,465	([6])
9	Number of persons engaged, total	14,714	14,570	2,795	4,921	2,413	1,653	855
10	Production and development workers	10,977	10,840	2,431	3,170	939	1,504	727
11	All other employees	2,713	2,710	187	1,584	1,401	100	83
12	Proprietors and firm members	1,024	1,020	177	167	73	49	45
13	Performing manual labor	649	622	136	67	26	25	16
	Man-hours worked by production and development workers:							
14	1954....1,000	21,317	21,045	3,229	6,197	1,927	2,764	1,506
15	1939....do	[3]23,356	(NA)	[4]10,508	[4]232	220	[5]12	([5])
	At mines:							
16	Underground....do	7,528	7,528	2,581	...	...	...	...
17	Open-pit....do	1,018	770	64	...	...	...	...
18	Surface (mine shops, yards, etc.)....do	[8]2,565	[8]2,563	} 584	{ ...	...	...	...
19	At preparation plants....do	[8]4,126	[8]4,104		{ 117	...	...	117
20	At oil and gas field operations....do	6,080	6,080	xxx	6,080	1,927	2,764	1,389
21	Man-hours spent on development and exploration work (included above)....do	5,265	5,265	69	4,097	1,013	2,748	336
22	Principal expenses designated below, total....$1,000	154,358	153,598	11,544	[6]82,153	59,354	17,363	[6]4,713
23	Wages of production and development workers....do	44,381	43,934	7,928	12,789	4,486	5,498	2,805
24	Salaries of all other employees....do	15,618	15,610	1,007	9,562	8,511	584	467
25	Minerals received for preparation....do	[2]3,355	[2]3,355	...	} [6]22,455	{ xxx	xxx	([6])
26	Supplies....do	[9]42,811	42,523	1,956		{ 11,887	8,921	924
	Purchased fuel:							
27	Coal....do	[9]203	203	...	...	...	...	...
28	Fuel oil....do	[9]1,694	1,694	45	454	97	325	32
29	Gas....do	[9]217	217	...	36	28	8	...
30	Other fuels....do	[9]2,193	2,188	33	1.212	303	696	213
31	Purchased electric energy....do	[9]3,125	3,124	430	186	172	4	10
32	Contract work....do	[9]40,761	40,750	145	35,459	33,870	1,327	262
33	Purchased machinery installed....do	[10]24,787	24,767	437	18,743	12,881	2,355	3,507
34	Capital expenditures, total....do	[10]56,479	56,479	543	45,724	38,851	2,773	4,100
35	Development and exploration of mineral property....do	[10]27,302	27,302	93	24,788	24,462	326	...
36	Preparation plant construction....do	[10]3,953	3,953	22	2,320	xxx	xxx	2,320
37	Other construction....do	[10]4,265	4,265	18	2,809	2,778	21	10
38	New machinery and equipment....do	[10]18,814	18,814	285	14,477	11,264	1,540	1,673
39	Used plant and equipment....do	[10]2,145	2,145	125	1,330	347	886	97
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[10]702	701	77	248	120	72	56
41	Per production worker	64	65	32	78	128	48	77
42	Prime movers....1,000	[10]518	517	34	241	113	72	56
43	Electric motors driven by purchased energy....do	[10]184	184	43	7	7	...	...
44	Horsepower rating of electric motors driven by energy generated at establishment....do	[10]16	16	3	6	3	1	2
45	Energy used....million kwh equivalent	[10]4,873	4,872	382	2,947	1,857	300	790
	Produced and used for fuel:							
46	Coal....1,000 short tons	44	44	44	xxx	xxx	xxx	xxx
47	Crude petroleum....1,000 barrels	10	10	xxx	10	...	...	...
48	Natural gas....million cu.ft	7,727	7.727	xxx	7.727	5,359	8	2.360
	Purchased fuel:							
49	Coal....$1,000	[10]31	31	...	...	...	...	...
50	Fuel oil....1,000 barrels	[10]400	400	9	76	20	51	5
51	Gas....million cu.ft	[10]1,250	1,250	...	350	229	119	2
52	Electric energy purchased....million kwh	[10]290	290	21	10	9	([11])	1
53	Electric energy generated and used....do	[10]24	24	3	15	7	1	7
54	Water intake, including mine water used....million gallons	[10]8,687	8,686	72	902	354	186	362
55	Per production worker....do	0.79	0.80	0.03	0.28	0.38	0.12	0.50

See footnotes at end of table.

AND INDUSTRY, 1954, AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Metal mining and Nonmetallic minerals (except fuels) mining											
Total		Copper, lead, zinc, gold, and silver ores			Tungsten ores	Uranium-radium-vanadium ores	Dimension stone		Crushed and broken stone		
Including operations classified in manufactures	Mineral industries only	Total	Lead and zinc ores	Lode and placer gold			All stone (including operations classified in manufactures)	Sandstone (including operations classified in manufactures)	All stone (including operations classified in manufactures)	Limestone (mineral industries only)	
589	569	141	64	63	49	228	18	12	10	4	1
669	646	149	68	67	58	254	18	12	15	7	2
639	616	146	67	65	54	249	18	12	14	6	3
351	(NA)	239	13	198	22	4	6	1	18	(NA)	4
177	172	55	21	29	19	5	5	3	9	7	5
[2]87,942	[2]84,623	16,119	12,822	3,264	1,918	(NA)	518	405	3,266	1,127	6
[3] [4]35,881	(NA)	[4]17,395	185	12,201	471	([4])	[3]77	(NA)	399	(NA)	7
[2]68,593	[2]65,599	11,967	10,075	1,823	1,122	(NA)	342	262	2,849	844	8
6,998	6,854	1,732	1,316	379	197	1,904	97	67	124	81	9
5,376	5,239	1,368	1,079	272	99	1,377	75	51	107	71	10
942	939	214	166	46	13	254	4	2	6	4	11
680	676	150	71	61	85	273	18	14	11	6	12
446	419	111	59	40	81	169	9	7	9	4	13
11,891	11,619	2,877	2,217	621	202	3,055	143	96	195	126	14
[3] [4]12,616	(NA)	[4]8,490	[4]208	[4]6,829	[4]233	([4])	[3]53	(NA)	292	(NA)	15
4,947	4,947	1,917	1,557	340	122	1,263	...	...	10	10	16
954	706	1	...	1	9	42	108	83	112	52	17
1,981	1,979	483	352	129	16	250	13	13	11	11	18
4,009	3,987	476	308	151	55	1,500	22	...	62	53	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
1,099	1,099	470	282	164	35	427	1	...	...	...	21
60,661	59,901	11,597	8,636	2,782	1,352	16,545	393	289	791	527	22
23,664	23,217	5,240	4,273	908	360	5,800	225	159	338	214	23
5,049	5,041	912	779	124	46	1,315	9	5	36	30	24
{ 2,632	2,632	1,610	506 }	1,381	852	{ (NA)	...	... }	[9]353	221 {	25
{ [9]19,123	18,835	2,637	2,326 }			{ 5,544	45	17 }			26
[9]203	203	48	40	8	...	138	...	...	[9]1	1	27
[9]1,195	1,195	79	73	6	6	795	1	...	[9]8	7	28
[9]181	181	1	1	([2])	([12])	158	...	...	...	...	29
[9]948	943	46	30	15	16	372	15	11	[9]6	6	30
[9]2,509	2,508	706	488	212	26	423	1	...	[9]18	17	31
[9]5,157	5,146	318	120	128	46	2,000	97	97	[9]31	31	32
[10]5,607	5,587	707	506	151	70	1,718	47	40	[10]35	31	33
[10]10,212	10,212	2,000	1,343	460	220	3,154	30	22	[10]35	31	34
[10]2,421	2,421	1,068	702	263	87	1,137	1	...	...	...	35
[10]1,611	1,611	143	66	32	65	246	1	1	...	...	36
[10]1,438	1,438	279	257	22	2	236	...	...	...	...	37
[10]4,052	4,052	380	243	90	22	1,214	23	16	[10]35	31	38
[10]690	690	130	75	53	44	321	5	5	...	...	39
[10]377	376	57	38	17	7	72	3	3	[10]9	7	40
70	72	42	35	63	([11])	52	40	58	84	96	41
[10]243	242	21	14	6	5	61	3	3	[10]8	6	42
[10]134	134	36	24	11	2	11	([12])	([12])	[10]1	1	43
[10]7	7	2	2	...	...	2	...	...	...	...	44
[10]1,544	1,543	129	99	29	8	920	6	3	[10]22	4	45
...	...	...	...	...	...	...	...	...	...	...	46
...	...	...	...	...	...	...	...	...	...	...	47
...	...	...	...	...	...	...	...	...	...	...	48
[10]31	31	5	4	1	...	24	...	...	([12])	([12])	49
[10]316	316	14	13	1	1	223	1	...	[10]1	1	50
[10]900	900	1	([12])	1	2	787	...	...	...	...	51
[10]259	259	52	39	13	1	29	([12])	...	[10]18	([12])	52
[10]6	6	4	4	...	...	1	...	...	...	...	53
[10]7,713	7,712	4,149	3,849	300	192	1,417	1	1	[10]2	2	54
1.43	1.47	3.03	3.57	1.10	([11])	1.03	0.01	0.02	0.02	0.03	55

Table 2.--DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP AND INDUSTRY, 1954, AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939—Con.

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION)

Item	Metal mining and Nonmetallic minerals (except fuels) mining—Continued								
		Clay, ceramic, and refractory minerals							
		All clay		Fire clay					
	Sand and gravel	Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures	Mineral industries only	Clay, ceramic, and refractory minerals, n.e.c. (including operations in manufactures)	Fluorspar	Gypsum (mineral industries only)	Other industries (including operations classified in manufactures)
Number of operating companies	50	56	42	18	15	20	4	3	39
Number of establishments	64	63	48	19	16	23	6	3	39
Number of mines, quarries, and producing oil and gas wells:									
1954	63	65	50	19	16	23	10	3	17
1939	14	31	(NA)	10	(NA)	13	4	(NA)	13
Number of preparation plants	64	8	8	3	3	2	4	2	6
Value of shipments:[1]									
1954 ..$1,000..	6,185	2,356	1,461	816	571	952	3,643	179	53,758
1939 ..do....	[4]472	[4]267	(NA)	70	(NA)	104	105	(NA)	[4]16,695
Value added in mining ..do....	5,028	1,774	1,020	628	433	810	2,336	157	43,018
Number of persons engaged, total	549	235	170	116	81	59	221	15	1,924
Production and development workers	390	185	120	101	66	51	186	10	1,579
All other employees	92	12	12	4	4	1	33	2	312
Proprietors and firm members	67	38	38	11	11	7	2	3	33
Performing manual labor	26	27	27	4	4	4	...	1	13
Man-hours worked by production and development workers:									
1954 ..1,000..	887	375	244	195	125	103	415	16	3,726
1939 ..do....	[4]195	[4]219	(NA)	68	(NA)	84	73	(NA)	[4]3,061
At mines:									
Underground ..do....	...	146	146	97	97	3	147	...	1,342
Open-pit ..do....	[7]399	179	48	81	11	96	54	11	39
Surface (mine shops, yards, etc.) ..do....	(NA)	35	35	7	7	...	48	...	1,125
At preparation plants ..do....	488	15	15	10	10	4	166	5	1,220
At oil and gas field operations ..do....	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Man-hours spent on development and exploration work (included above) ..do....	14	11	11	...	...	11	18	...	123
Principal expenses designated below, total ..$1,000..	3,126	1,283	942	505	355	374	2,370	48	23,156
Wages of production and development workers ..do....	1,602	639	439	302	202	226	822	21	8,617
Salaries of all other employees ..do....	338	54	54	13	13	1	182	4	2,153
Minerals received for preparation ..do....	xxx		245		...		...	...	[9]8,832
Supplies ..do....	687				30		791	18	
Purchased fuel:									
Coal ..do....	...		...		...		...	...	[9]16
Fuel oil ..do....	112	590	11	190	5	147	108	2	[9]73
Gas ..do....	...		...		...		21	1	...
Other fuels ..do....	249		29		9		26	2	[9]187
Purchased electric energy ..do....	11[5]		13		6		139	...	[9]1,070
Contract work ..do....	25		151		90		281	...	[9]2,208
Purchased machinery installed ..do....	779		133		47		154	7	[10]1,957
Capital expenditures, total ..do....	808		141		49		213	8	[10]3,603
Development and exploration of mineral property ..do....	37		16		...		52	1	[10]22
Preparation plant construction ..do....	25		...		...		48	4	[10]1,079
Other construction ..do....	16		9		9		...	...	[10]896
New machinery and equipment ..do....	591		90		29		108	2	[10]1,587
Used plant and equipment ..do....	139		26		11		5	1	[10]19
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total ..1,000..	51		8		2		8	1	[10]161
Per production worker	131		67		26		46	128	102
Prime movers ..1,000..	46	(NA)	7	(NA)	2	(NA)	4	1	[10]87
Electric motors driven by purchased energy ..do....	5		1		...		4	( )	[10]74
Horsepower rating of electric motors driven by energy generated at establishment ..do....	([2])		...		...		...	...	[10]3
Energy used ..million kwh equivalent..	109		15		9		99	6	[10]230
Purchased fuel:									
Coal ..$1,000..	...		...		...		...	...	[10]2
Fuel oil ..1,000 barrels..	25		1		([12])		34	1	[10]15
Gas ..million cu.ft..	...		24		24		76	10	...
Electric energy purchased ..million kwh..	5		([12])		([12])		11	...	[10]143
Electric energy generated and used ..do....	...		([12])		...		...	...	[10]1
Water intake, including mine water used ..million gallons..	480		9		9		281	...	[10]1,182
Per production worker ..do....	1.23		0.08		0.14		1.51	...	0.75

NA Not available. xxx Not applicable. [1]See table 1, footnote 6. [2]See table 1, footnote 7. [3]See table 1, footnote 1. [4]Included with the figures for Other industries are data for the following producing operations: 2 natural gas liquids plants, 1 copper ores mine and 1 mill, 4 uranium-radium-vanadium ores mines and 3 mills, 1 foundry sand mine and 1 preparation plant, and 1 kaolin and ball clay mine and for the following nonproducing operations: 1 bituminous coal mine, 11 mines and 1 mill in the lode gold industry, 3 mines and 1 mill in the lead and zinc ores industries, and 2 tungsten ores mines. [5]Figures for Oil and gas field contract services, n.e.c., are included with those for Drilling oil and gas wells contract services. See also footnote 4. [6]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is show for these industries. [7]Includes man-hours worked on floating equipment. [8]For bituminous coal, man-hours at "Preparation plant" are included with man-hours at "Surface (including mine shops and yards)," since less than one percent of the coal shipped was mechanically cleaned. [9]Figures for fuels, electric energy, and contract work for crushed stone, clay, and gypsum operations classified in manufactures are included with figures for supplies. [10]Excludes figures for crushed stone, clay, and gypsum operations classified in manufactures. [11]Not shown since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers. [12]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Colorado, all mineral operations:									
Including operations in manufactures	1,043	[2]262,214	[2]207,541	10,977	2,713	21,317	44,381	15,618	[3]54,334
Mineral industries only:									
Including crude petroleum and natural gas extraction	1,020	[2]258,895	[2]204,547	10,840	2,710	21,045	43,934	15,610	54,334
Excluding crude petroleum and natural gas extraction									
Bituminous coal mining	127	15,983	13,480	2,431	187	3,229	7,928	1,007	418
Crude petroleum and natural gas extraction, total	247	158,289	[4]125,468	3,170	1,584	6,197	12,789	9,562	44,394
Crude petroleum and natural gas[5]	154	127,536	107,149	939	1,401	1,927	4,486	8,511	38,504
Natural gas liquids and Oil and gas field contract services[6]	93	30,753	([4])	2,231	183	4,270	8,303	1,051	5,890
Metal mining and Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	669	87,942	[2]68,593	5,376	942	11,891	23,664	5,049	[3]9,522
Mineral industries only	646	84,623	[2]65,599	5,239	939	11,619	23,217	5,041	9,522
Copper, lead, zinc, gold, and silver ores	149	16,119	11,967	1,368	214	2,877	5,240	912	1,870
Lead and zinc ores	68	12,822	10,075	1,079	166	2,217	4,273	779	1,268
Gold	67	3,264	1,823	272	46	621	908	124	407
Tungsten ores	58	1,918	1,122	99	13	202	360	46	176
Uranium-radium-vanadium ores	254	(NA)	(NA)	1,377	254	3,055	5,800	1,315	2,833
Dimension stone (including operations in manufactures)	18	518	342	75	4	143	225	9	25
Crushed and broken stone (including operations in manufactures)	15	3,266	2,849	107	6	195	338	36	[3]35
Sand and gravel	64	6,185	5,028	390	92	887	1,602	338	669
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	63	2,356	1,774	185	12	375	639	54	(NA)
Mineral industries only	48	1,461	1,020	120	12	244	439	54	115
Other industries (including operations in manufactures)	48	57,580	45,511	1,775	347	4,157	9,460	2,339	[3]3,799
COUNTY									
Adams:									
Including crude petroleum and natural gas	29	(NA)	(NA)	[7]199	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	15	1,887	1,633	119	52	359	571	209	203
Arapahoe	6	360	316	27	4	68	136	15	57
Archuleta	4	(NA)	(NA)	[7]24	([7])	(NA)	(NA)	(NA)	(NA)
Boulder, total:									
Including operations in manufactures	85	[2]4,345	[2]2,801	[7]399	([7])	728	[7]1,423	([7])	[3]544
Mineral industries only	81	[2]4,174	[2]2,661	316	43	648	1,136	159	544
Metal mining	63	[2]1,920	[2]1,207	124	18	256	456	56	337
Tungsten ores	55	1,916	1,132	93	12	192	340	44	152
Bituminous coal	4	205	166	36	7	61	119	20	...
Nonmetallic minerals (except fuel) mining:									
Including operations in manufactures	18	2,220	1,503	[7]214	([7])	411	[7]772	([7])	[3]207
Mineral industries only	14	1,949	1,288	156	18	331	561	83	207
Fluorspar	3	1,363	837	92	12	201	346	62	82
Chaffee (mineral industries only)	10	1,433	1,201	82	21	168	310	126	65
Clear Creek	20	[2]71	[2]62	38	6	66	111	9	140
Delta (Bituminous coal only)	7	237	194	46	7	47	118	10	2

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Denver (mineral industries only):.									
Including crude petroleum and natural gas	42	(NA)	(NA)	[7]564	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	15	[2]1,437	[2]1,099	62	29	123	249	213	221
Crude petroleum and natural gas[8]	27	(NA)	(NA)	[7]1,015	([7])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	5	1,142	991	36	1	68	154	2	20
Dolores	7	(NA)	(NA)	[7]99	([7])	(D)	(D)	(D)	(D)
Douglas (mineral industries only)	7	209	177	23	2	36	63	9	36
El Paso (mineral industries only)	14	[2]1,001	[2]556	50	36	102	198	125	77
Fremont (mineral industries only):									
Including crude petroleum and natural gas	53	(NA)	(NA)	[7]139	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	49	[2]1,307	[2]1,092	133	14	226	358	43	105
Bituminous coal	24	736	664	68	9	120	197	25	39
Nonmetallic minerals (except fuels) mining	19	562	420	56	5	92	138	18	36
Crushed and broken stone	7	280	182	35	3	61	98	14	35
Garfield	12	[2] [9]223	[2] [9]202	[7]187	([7])	[9]328	[7] [9]850	([7])	[9]125
Bituminous coal	6	192	179	26	...	41	84	...	41
Gilpin	18	(NA)	(NA)	116	15	245	466	109	242
Gunnison	20	1,438	1,242	230	17	294	753	79	92
Bituminous coal	9	1,400	1,217	217	12	279	722	57	54
Huerfano (Bituminous coal only)	9	322	285	39	9	70	126	29	7
Jackson	4	(NA)	(NA)	[7]80	([7])	(NA)	(NA)	(NA)	(NA)
Jefferson:									
Including operations in manufactures	41	[2]1,363	[2]1,030	113	11	229	444	69	(NA)
Mineral industries only	37	[2]1,118	[2]835	78	11	159	344	69	184
Nonmetallic minerals (except fuels) mining:									
Including operations in manufacturea	30	1,284	1,009	103	7	211	409	21	(NA)
Mineral industries only	26	1,039	814	68	7	141	309	21	91
Sand and gravel	6	557	448	28	6	61	130	20	5
Lake	16	(D)	(D)	1,310	276	(D)	(D)	(D)	(D)
La Plata, total:									
Including crude petroleum and natural gas	30	(NA)	(NA)	[7]264	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	20	[2]458	[2]376	[7]190	([7])	418	[7]778	([7])	236
Bituminous coal	11	207	172	[7]32	([7])	53	[7]107	([7])	...
Crude petroleum and natural gas[8]	10	(NA)	(NA)	[7]74	([7])	(NA)	(NA)	(NA)	(NA)
Metal mining and Nonmetallic minerals (except fuels) mining	9	[2]251	[2]204	158	...	365	671	...	236
Larimer (including operations in manufactures):									
Including crude petroleum and natural gas	22	(NA)	(NA)	[7]58	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	18	1,371	1,184	49	...	91	167	...	[2]35
Crude petroleum and natural gas[8]	4	(NA)	(NA)	[7]30	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	14	1,367	1,181	45	...	84	152	...	[2]15
Mineral industries only	9	301	192	24	...	43	80	...	15
Dimension stone (including operations in manufacturea)	5	137	74	5	...	8	9	...	8
Las Animas (Bituminous coal only)	17	6,370	5,226	1,204	67	1,455	3,679	482	146
Logan	34	(NA)	(NA)	[7]159	([7])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Mesa (mineral industries only):									
Including crude petroleum and natural gas	65	(NA)	(NA)	[7]471	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	60	[2]748	[2]584	352	88	697	1,448	482	786
Metal mining and Nonmetallic minerals (except fuels) mining	51	[2]520	[2]392	317	88	643	1,329	482	783
Uranium-radium-vanadium ores	44	(NA)	(NA)	281	68	570	1,173	393	538
Bituminous coal	9	228	192	35	...	54	119	...	3
Crude petroleum and natural gas[8]	5	(NA)	(NA)	[7]48	([7])	(NA)	(NA)	(NA)	(NA)
Mineral	4	(D)	(D)	[7]93	([7])	(D)	(D)	(D)	(D)
Moffat	9	(NA)	(NA)	[7]149	([7])	(NA)	(NA)	(NA)	(NA)
Montrose	108	[2]526	[2]391	660	119	1,371	2,841	624	1,034
Uranium-radium-vanadium ores	101	(NA)	(NA)	604	119	1,249	2,614	624	978
Morgan	31	(NA)	(NA)	[7]209	([7])	(NA)	(NA)	(NA)	(NA)
Ouray	7	(D)	(D)	[7]318	([7])	(D)	(D)	(D)	(D)
Prowers	3	(NA)	(NA)	[7]26	([7])	(NA)	(NA)	(NA)	(NA)
Pueblo (mineral industries only)	5	301	286	[7]32	([7])	61	[7]105	([7])	...
Rio Blanco	29	(NA)	(NA)	[7]370	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	19	(NA)	(NA)	[7]292	([7])	(NA)	(NA)	(NA)	(NA)
Routt	18	(NA)	(NA)	[7]288	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	12	1,926	1,624	256	22	278	783	79	31
San Juan	21	[2]1,742	[2]1,335	187	24	438	739	101	123
San Miguel	44	(NA)	(NA)	230	15	440	961	57	576
Summit	15	(D)	(D)	55	3	101	181	7	164
Teller (mineral industries only)	27	(D)	(D)	207	32	471	682	93	211
Washington	19	(NA)	(NA)	[7]103	([7])	(NA)	(NA)	(NA)	(NA)
Weld	30	(NA)	(NA)	[7]404	([7])	(D)	(D)	(D)	(D)
Bituminous coal	8	2,614	2,260	343	18	530	1,360	86	5

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 6.
[2]See table 1, footnote 7.
[3]See table 2, footnote 10.
[4]See table 2, footnote 6.
[5]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[6]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.
[7]Figures for "All other employees" are included with those for "Production and development workers."
[8]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.
[9]Excludes data for 1 crude petroleum or natural gas establishment.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	State and county	All mineral operations			Metal mining					
		Total	Classified in mineral industries	Included in manufactures	Iron ores	Copper ores	Lead and zinc ores	Gold and silver ores		
								Lode gold	Placer gold	Silver ores
1	Colorado, total.....	1,043	1,020	23	1	2	68	54	13	12
2	Adams.....	29	29	...	...	...	...	...	2	...
3	Arapahoe.....	8	8	...	...	...	...	...	...	...
4	Archuleta.....	4	4	...	...	...	...	...	...	...
5	Bent.....	3	3	...	...	...	...	...	...	...
6	Boulder.....	85	81	4	...	...	...	4	...	2
7	Chaffee.....	11	10	1	...	...	4	...	1	1
8	Clear Creek.....	20	20	...	...	...	3	5	1	3
9	Costilla.....	1	1	...	...	...	...	...	...	...
10	Custer.....	4	4	...	...	...	2	1	...	...
11	Delta.....	10	9	1	...	...	...	...	...	...
12	Denver.....	43	42	1	...	...	...	...	...	...
13	Dolores.....	7	7	...	...	...	2	1	...	...
14	Douglas.....	8	7	1	...	...	...	...	...	...
15	Eagle.....	4	4	...	...	...	3	...	...	...
16	El Paso.....	15	14	1	...	...	...	1	...	...
17	Fremont.....	55	53	2	...	1	...	...	...	...
18	Garfield.....	12	12	...	...	...	...	...	...	...
19	Gilpin.....	18	18	...	...	...	2	4	...	1
20	Grand.....	1	1	...	...	...	...	...	...	...
21	Gunnison.....	20	20	...	...	...	6	1	...	...
22	Hinsdale.....	3	3	...	...	...	1	2	...	...
23	Huerfano.....	10	10	...	...	...	...	...	...	...
24	Jackson.....	4	4	...	...	...	...	...	...	...
25	Jefferson.....	41	37	4	...	...	...	...	3	...
26	Kit Carson.....	1	1	...	...	...	...	...	...	...
27	Lake.....	16	16	...	...	...	10	...	...	2
28	La Plata.....	30	30	...	...	...	...	3	...	...
29	Larimer.....	22	17	5	...	...	...	...	...	...
30	Las Animas.....	18	18	...	...	...	...	...	...	...
31	Lincoln.....	1	1	...	...	...	...	...	...	...
32	Logan.....	34	34	...	...	...	...	...	...	...
33	Mesa.....	66	65	1	...	...	...	...	...	...
34	Mineral.....	4	4	...	...	...	4	...	...	...
35	Moffat.....	9	9	...	...	...	...	...	...	...
36	Montezuma.....	8	8	...	...	...	...	...	...	...
37	Montrose.....	108	108	...	...	...	...	...	...	...
38	Morgan.....	31	31	...	...	...	...	...	...	...
39	Ouray.....	7	7	...	1	...	4	...	...	1
40	Park.....	13	13	...	...	...	4	5	4	...
41	Phillips.....	1	1	...	...	...	...	...	...	...
42	Pitkin.....	1	1	...	...	...	...	...	...	...
43	Prowers.....	3	3	...	...	...	...	...	...	...
44	Pueblo.....	6	5	1	...	...	...	...	...	...
45	Rio Blanco.....	29	29	...	...	...	...	...	...	...
46	Routt.....	18	18	...	...	...	...	...	...	...
47	Saguache.....	4	4	...	...	1	2	1	...	...
48	San Juan.....	21	21	...	...	...	10	3	...	...
49	San Miguel.....	44	44	...	...	...	3	...	...	...
50	Summit.....	15	15	...	...	...	8	1	2	2
51	Teller.....	28	27	1	...	...	...	22	...	...
52	Washington.....	19	19	...	...	...	...	...	...	...
53	Weld.....	30	30	...	...	...	...	...	...	...
54	Yuma.....	1	1	...	...	...	...	...	...	...

BY INDUSTRY AND COUNTY: 1954

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Metal mining—Continued							Bituminous coal	Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining (Dimension stone)			
Ferro-alloy ores, except vanadium				Metal mining contract services	Miscellaneous metal ores							Granite		
Manganese ores	Molybdenum ores	Tungsten ores	Columbium ores		Uranium-radium-vanadium ores	Metallic ores, n.e.c.		Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Limestone	Classified in mineral industries	Included in manufactures	
1	1	58	1	20	254	5	127	154	5	88	2	1	2	1
...	...	...	...	...	...	...	...	14	...		...	...	...	2
...	...	...	...	...	...	...	...	2	...		...	...	...	3
...	...	...	...	...	1	...	1	2	...		...	...	...	4
...	...	...	...	...	...	...	...	...	...		...	...	...	5
...	...	55	...	...	2	...	4	...	...		...	...	...	6
...	...	...	...	...	...	...	...	...	...		...	...	1	7
...	...	...	...	...	7	...	...	...	...		...	...	...	8
...	...	...	...	...	...	...	...	...	...		...	...	...	9
...	...	...	...	...	...	...	...	...	...		...	...	...	10
...	...	...	...	...	1	...	7	...	...		...	...	...	11
...	...	...	...	...	7	...	...	27	...		...	...	...	12
...	...	...	...	1	3	...	...	...	...		...	...	...	13
...	...	...	...	...	...	...	...	...	...		...	...	...	14
...	...	...	...	...	1	...	...	...	...		...	...	...	15
...	...	...	...	...	2	...	2	...	...		...	...	...	16
...	...	1	...	...	2	2	24	4	...		2	...	...	17
...	...	...	...	...	3	...	6	1	...		...	...	...	18
...	...	...	...	2	9	...	...	...	...		...	...	...	19
...	...	...	...	...	...	...	...	...	...		...	...	...	20
...	...	1	1	...	...	...	9	...	...		...	...	...	21
...	...	...	...	...	...	...	...	...	...		...	...	...	22
...	...	...	...	...	...	...	9	...	...		...	...	...	23
...	...	...	...	...	...	...	1	2	...		...	...	...	24
...	...	...	...	...	7	1	...	...	...		...	...	...	25
...	...	...	...	...	...	...	...	...	...		...	...	...	26
...	1	...	...	2	...	...	...	...	...		...	...	...	27
...	...	...	...	...	3	...	11	10	...	(NA)	...	...	...	28
...	...	...	...	...	2	2	...	4	...		...	1	...	29
...	...	...	...	...	...	...	17	...	...		...	...	...	30
...	...	...	...	...	...	...	...	1	...		...	...	...	31
...	...	...	...	...	...	...	...	32	2		...	...	...	32
...	...	...	...	5	44	...	9	5	...		...	...	...	33
...	...	...	...	...	...	...	...	...	...		...	...	...	34
...	...	...	...	...	...	...	1	6	1		...	...	...	35
...	...	...	...	1	5	...	1	1	...		...	...	...	36
...	...	...	...	6	101	...	1	...	...		...	...	...	37
...	...	...	...	...	...	...	...	30	...		...	...	...	38
...	...	...	...	...	1	...	...	...	...		...	...	...	39
...	...	...	...	...	...	...	...	...	...		...	...	...	40
...	...	...	...	...	...	...	...	1	...		...	...	...	41
...	...	...	...	...	...	...	1	...	...		...	...	...	42
...	...	...	...	...	...	...	...	1	...		...	...	...	43
...	...	...	...	...	...	...	...	...	...		...	...	...	44
...	...	...	...	...	4	...	3	19	1		...	...	...	45
1	...	...	...	...	1	...	12	3	...		...	...	...	46
...	...	...	...	...	...	...	...	...	...		...	...	...	47
...	...	1	...	3	4	...	...	...	...		...	...	...	48
...	...	...	...	...	41	...	...	...	...		...	...	...	49
...	...	...	...	...	2	...	...	...	...		...	...	...	50
...	...	...	...	...	1	...	...	...	...		...	...	1	51
...	...	...	...	...	...	...	...	18	1		...	...	...	52
...	...	...	...	...	...	...	8	20	...		...	...	...	53
...	...	...	...	...	...	...	...	...	...		...	...	...	54

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	State and county	Nonmetallic minerals (except fuels) mining—Continued									
		Dimension stone—Continued			Crushed and broken stone					Sand and gravel	
		Sandstone		Stone, n.e.c.	Limestone		Marble	Sandstone	Stone, n.e.c.	Common sand and gravel	Foundry sand
		Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in manufactures					
1	Colorado, total.....	9	3	1	7	2	1	3	2	61	3
2	Adams.....	...	...	...	...	...	...	...	...	13	...
3	Arapahoe.....	...	...	...	...	...	...	...	...	6	...
4	Archuleta.....	...	...	...	...	...	...	...	...	...	...
5	Bent.....	...	...	...	...	...	...	...	...	1	...
6	Boulder.....	6	1	1	...	...	...	...	...	2	...
7	Chaffee.....	...	...	...	1	...	...	...	...	...	...
8	Clear Creek.....	...	...	...	...	...	...	...	...	...	...
9	Costilla.....	...	...	...	...	...	...	...	...	...	...
10	Custer.....	...	...	...	...	...	...	...	...	...	...
11	Delta.....	...	...	...	...	...	...	...	...	1	...
12	Denver.....	...	...	...	...	...	...	...	...	5	...
13	Dolores.....	...	...	...	...	...	...	...	...	...	...
14	Douglas.....	...	...	...	...	...	...	...	1	1	1
15	Eagle.....	...	...	...	...	...	...	...	...	...	...
16	El Paso.....	...	...	...	1	...	...	...	...	5	...
17	Fremont.....	1	...	...	3	1	1	2	1	1	...
18	Garfield.....	...	...	...	1	...	...	...	...	1	...
19	Gilpin.....	...	...	...	...	...	...	...	...	...	...
20	Grand.....	...	...	...	...	...	...	...	...	1	...
21	Gunnison.....	...	...	...	...	...	...	...	...	...	...
22	Hinsdale.....	...	...	...	...	...	...	...	...	...	...
23	Huerfano.....	...	...	...	...	...	...	...	...	...	...
24	Jackson.....	...	...	...	...	...	...	...	...	...	...
25	Jefferson.....	...	...	...	...	...	...	...	...	5	1
26	Kit Carson.....	...	...	...	...	...	...	...	...	1	...
27	Lake.....	...	...	...	...	...	...	1	...	...	...
28	La Plata.....	...	...	...	...	...	...	...	...	...	...
29	Larimer.....	...	...	...	...	...	...	...	...	3	...
30	Las Animas.....	2	2	...	1	1	...	...	...	2	...
31	Lincoln.....	...	...	...	...	...	...	...	...	1	...
32	Logan.....	...	...	...	...	...	...	...	...	...	...
33	Mesa.....	...	...	...	...	...	...	...	...	...	...
34	Mineral.....	...	...	...	...	...	...	...	...	2	...
35	Moffat.....	...	...	...	...	...	...	...	...	...	...
36	Montezuma.....	...	...	...	...	...	...	...	...	1	...
37	Montrose.....	...	...	...	...	...	...	...	...	...	...
38	Morgan.....	...	...	...	...	...	...	...	...	1	...
39	Ouray.....	...	...	...	...	...	...	...	...	...	...
40	Park.....	...	...	...	...	...	...	...	...	...	...
41	Phillips.....	...	...	...	...	...	...	...	...	...	...
42	Pitkin.....	...	...	...	...	...	...	...	...	...	...
43	Prowers.....	...	...	...	...	...	...	...	...	2	...
44	Pueblo.....	...	...	...	...	...	...	...	...	1	1
45	Rio Blanco.....	...	...	...	...	...	...	...	...	2	...
46	Routt.....	...	...	...	...	...	...	...	...	...	...
47	Saguache.....	...	...	...	...	...	...	...	...	...	...
48	San Juan.....	...	...	...	...	...	...	...	...	...	...
49	San Miguel.....	...	...	...	...	...	...	...	...	...	...
50	Summit.....	...	...	...	...	...	...	...	...	...	...
51	Teller.....	...	...	...	...	...	...	...	...	...	...
52	Washington.....	...	...	...	...	...	...	...	...	...	...
53	Weld.....	...	...	...	...	...	...	...	...	2	...
54	Yuma.....	...	...	...	...	...	...	...	...	1	...

[1]See table 3, footnote 5, and for counties table 3, footnote 8.
[2]See table 3, footnote 6.

BY INDUSTRY AND COUNTY: 1954—Continued

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued															
Clay, ceramic, and refractory minerals						Chemical and fertilizer mineral mining		Non-metallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels)						
	Fire clay			Clay, ceramic, and refractory minerals, n.e.c.					Gypsum						
Bentonite	Classified in mineral industries	Included in manufactures	Feldspar	Classified in mineral industries	Included in manufactures	Fluorspar	Chemical and fertilizer mineral mining, n.e.c.		Classified in mineral industries	Included in manufactures	Mica	Pumice and pumicite	Peat	Non-metallic minerals, n.e.c.	
1	16	3	20	11	12	6	2	1	3	1	2	2	1	1	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	5
...	...	...	...	1	3	3	...	...	...	...	...	...	1	...	6
...	...	...	1	...	...	2	...	...	...	...	...	...	...	...	7
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	8
...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	10
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	11
...	...	...	1	2	1	...	...	...	...	...	...	...	...	...	12
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13
...	4	1	...	...	...	...	...	...	...	...	...	...	...	...	14
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15
...	1	...	...	1	1	...	...	...	...	...	1	...	...	...	16
...	2	1	4	...	...	...	...	...	2	...	...	...	...	...	17
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20
...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	21
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	23
...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	24
...	5	1	7	7	3	...	1	...	...	...	...	...	...	...	25
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28
...	...	...	2	...	1	...	...	...	1	1	...	...	...	...	29
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	32
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	33
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	34
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	35
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	37
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	38
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	39
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	41
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	43
...	3	...	...	...	1	...	...	...	...	...	...	...	...	...	44
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	45
...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	46
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	47
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	48
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	49
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	50
...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	51
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	52
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	53
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	54

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Colorado, all mineral operations:												
Including operations classified in manufactures	1,043	258	434	157	76	61	37	11	6	2	1	...
Mineral industries only	1,020	254	427	151	71	60	37	11	6	2	1	...
Metal mining, total	490	168	226	53	12	13	10	4	3	...	1	...
Iron ores	1	1	...	...	...	...	...	...	...	...	...	...
Copper ores	2	1	1	...	...	...	...	...	...	...	...	...
Lead and zinc ores:												
Ores valued chiefly for lead	59	23	18	8	1	5	3	...	1	...	...	...
Ores valued chiefly for zinc	9	4	3	1	...	...	...	...	1	...	...	...
Gold and silver ores:												
Lode gold	54	17	28	4	1	1	3	...	...	...	...	...
Placer gold	13	8	5	...	...	...	...	...	...	...	...	...
Silver ores	12	7	4	...	1	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Manganese ores	1	1	...	...	...	...	...	...	...	...	...	...
Molybdenum ores	1	...	...	...	...	...	...	...	...	...	1	...
Tungsten ores	58	41	13	1	2	1	...	...	...	...	...	...
Columbium ores	1	...	1	...	...	...	...	...	...	...	...	...
Metal mining contract services	20	2	12	2	...	2	1	1	...	...	...	...
Miscellaneous metal ores:												
Uranium-radium-vanadium ores	254	61	138	37	7	4	3	3	1	...	...	...
Metallic ores, n.e.c	5	3	2	...	...	...	...	...	...	...	...	...
Bituminous coal	127	12	64	16	11	13	7	2	1	1	...	...
Crude petroleum and natural gas extraction, total	247	43	78	48	27	27	16	5	2	1	...	...
Crude petroleum and Natural gas	154	40	55	27	10	11	9	2	...	...	...	...
Natural gas liquids	5	...	2	2	...	...	1	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	44	...	9	7	10	10	3	2	2	1	...	...
Oil and gas field contract services, n.e.c	44	3	12	12	7	6	3	1	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	179	35	66	40	26	8	4	...	...	...	...	...
Mineral industries only	156	31	59	34	21	7	4	...	...	...	...	...
Dimension stone:												
Limestone	2	...	2	...	...	...	...	...	...	...	...	...
Granite:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	...	1	1	...	...	...	...	...	...	...
Sandstone:												
Classified in mineral industries	9	2	5	1	1	...	...	...	...	...	...	...
Included in manufactures	3	1	1	...	...	1	...	...	...	...	...	...
Stone, n.e.c	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	7	...	3	3	...	1	...	...	...	...	...	...
Included in manufactures	2	...	...	1	1	...	...	...	...	...	...	...
Marble	1	...	...	...	1	...	...	...	...	...	...	...
Sandstone	3	1	2	...	...	...	...	...	...	...	...	...
Stone, n.e.c	2	1	1	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	61	3	22	16	15	3	2	...	...	...	...	...
Foundry sand	3	1	1	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	1	1	...	...	...	...	...	...	...	...	...	...
Fire clay:												
Classified in mineral industries	16	2	6	7	1	...	...	...	...	...	...	...
Included in manufactures	3	...	...	...	3	...	...	...	...	...	...	...
Feldspar	20	13	5	...	1	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	11	4	5	2	...	...	...	...	...	...	...	...
Included in manufactures	12	3	6	3	...	...	...	...	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Nonmetallic minerals (except fuels) mining, total—Continued												
Chemical and fertilizer mineral mining:												
Fluorspar	6	...	1	...	1	2	2	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	2	1	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	1	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels) mining:												
Gypsum:												
Classified in mineral industries	3	...	1	2	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Mica	2	2	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	2	...	1	1	...	...	...	...	...	...	...	...
Peat	1	...	...	1	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c.	1	...	...	...	1	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[1]			
			Million gallons	Million gallons per production worker[2]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Colorado, total	10,840	[3]204,547	7,580	0.70	37	5,394	1,106	4,246	18,699	5	76	12	7
Bituminous coal	2,431	13,480	64	0.03	5	7	8	780	81	50	50	...	...
Crude petroleum and natural gas extraction, total	3,170	[4]125,468	902	0.28	7	326	xxx	xxx	7,556	3	50	36	11
Crude petroleum and Natural gas	939	107,149	354	0.38	3	286	xxx	xxx	354	2	70	10	[5]18
Drilling oil and gas wells contract services	1,504	11,465	186	0.12	16	...	xxx	xxx	186	10	19	56	[5]15
Natural gas liquids and Oil and gas field contract services, n.e.c	727	([4])	362	0.50	(NA)	40	xxx	xxx	7,016	...	48	52	...
Metal mining and Nonmetallic minerals (except fuels) mining, total	5,239	[3]65,599	6,614	1.26	101	5,061	1,098	3,466	11,062	5	80	8	7
Copper, lead, zinc, gold, and silver ores	1,368	11,967	3,337	2.44	279	2,701	812	3,022	4,154	10	89	1	...
Lead and zinc ores	1,079	10,075	3,094	2.87	307	2,560	755	1,936	3,849	3	96	1	...
Gold	272	1,823	243	0.89	134	141	57	1,086	305	99	([6])	1	...
Tungsten ores	99	1,122	188	([7])	167	188	4	34	279	1	88	...	11
Uranium-radium-vanadium ores	1,377	(NA)	1,417	1.03	(NA)	1,355	...	1	1,417	...	57	28	15
Crushed and broken limestone	71	844	2	0.03	2	...	...	...	2	100	...	...	...
Sand and gravel	390	5,028	450	1.15	89	441	30	...	516	...	60	16	[5]24
Clay, ceramic, and refractory minerals:													
Fire clay	66	433	9	0.14	21	...	...	...	9	100	...	...	...
Other clays	54	587	...	...	...	...	...	...	...	...	...	...	...
Fluorspar	186	2,336	213	1.15	91	208	68	409	356	2	24	26	[8]48
Gypsum	10	157	...	...	...	...	...	...	...	...	...	...	...
Dimension stone and other industries	1,618	43,125	998	0.62	23	168	184	...	4,329	...	100	...	...

NA Not available.
xxx Not applicable.
[1]For the Crude petroleum and Natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 6 million gallons of brackish water.
[2]For computations of water intake per production worker, including mine water used, see table 2.
[3]See table 1, footnote 7.
[4]See table 2, footnote 6.
[5]Includes "not specified" as follows: for Crude petroleum and Natural gas, 8 percent; for Drilling oil and gas wells contract services, 9 percent; and for Sand and gravel, 18 percent.
[6]Less than 0.5 percent.
[7]See table 2, footnote 11.
[8]Represents "not specified."

CONNECTICUT

106-1

MINING IN CONNECTICUT: 1954

Rank among States:
Employment, 44
Value of shipments, 44



△ NONMETALLUC MINERALS, EXCEPT FUEL, MINING

EACH SYMBOL REPRESENTS 50 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE..... $10,100

SCALE
10 0 10 MILES

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Compsrative statistics excluding ssnd, gravel, common clay, and shale operations and quarries operated as part of lime establishments					
	1954	1939[1]	1929[2]	1954	1939[1]	1929	1919[3]	1909	1902[4]
Number of operating companies	96	52	(NA)	41	[5]24	(NA)	(NA)	[5]71	[5]78
Number of establishments	104	(NA)	52	42	(NA)	42	41	71	(NA)
Number of mines and quarries	106	63	53	43	29	42	47	75	90
Number of preparation plants	76	44	(NA)	29	21	(NA)	(NA)	(NA)	(NA)
Value of shipments[6]....$1,000	11,079	2,962	4,193	5,911	2,057	3,810	1,649	1,376	1,426
Value added in mining....do	9,228	2,241	3,711	4,869	1,565	3,382	1,197	1,163	1,190
Number of persons engaged, total	882	725	951	510	493	870	642	1,546	1,648
Production and development workers	647	635	816	377	448	761	543	1,385	[7]1,497
All other employees	186	71	[8]116	116	42	[8]93	72	85	151
Proprietors and firm members	49	19	19	17	3	16	27	76	
Performing manual labor	25	4	(NA)	10	1	(NA)	5	29	(NA)
Man-hours worked by production and development workers....1,000	1,580	1,370		908	(NA)		(NA)	(NA)	
Principal expenses designated below, total....$1,000	6,046	1,656	2,103	3,544	1,138	1,908	1,243	1,025	1,177
Wages of production and development workers....do	2,696	754	1,307	1,478	532	1,220	647	729	809
Salaries of all other employees....do	986	181	[8]314	649	114	[8]260	144	83	132
Minerals received for preparation....do	37	(NA)	(NA)	37	(NA)	(NA)	...	...	(NA)
Supplies....do	[9]1,354	436	205	[9]825	302	185	304	127	
Purchased fuel....do	[9]388	137	121	[9]157	99	109	76	72	236
Purchased electric energy....do	[9]283	127	156	[9]184	91	134	45		
Contract work....do	[9]302	21	...	[9]214	...	...	27	14	...
Purchased machinery installed....do	[10]594		252	[10]158		208	(NA)		
Capital expenditures, total....do	[10]1,107	(NA)	(NA)	[10]533		(NA)			
Development and exploration of mineral property....do	[10]51		44	[10]23		44	11	(NA)	(NA)
Preparation plant construction....do	[10]226	49		[10]93					
Other construction....do	[10]276		(NA)	[10]266		(NA)	(NA)		
New machinery and equipment....do	[10]462	112		[10]107					
Used plant and equipment....do	[10]92	31		[10]44					
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[10]65	28	14	[10]27		11	9	6	8
Per production worker	104	45	17	81	(NA)	14	17	4	5
Prime movers....1,000	[10]49	16	4	[10]17		3	5	6	8
Electric motors driven by purchased energy....do	[10]16	12	10	[10]10		8	4	...	...
Horsepower rating of electric motors driven by energy generated at establishment....do	[10]1	1	...	...		...	...	...	...
Energy used....million kwh equivalent	[10]143	95	153	[10]55		135	(NA)		
Coal....1,000 short tons	[10]1	8	18	...		16	12		
Fuel oils....1,000 barrels	[10]40	5	1	[10]22		1	...	(NA)	(NA)
Gas....million cu.ft	([11])	...	...	...		...	...		
Electric energy purchased....million kwh	[10]12	5	7	[10]8		6	(NA)		
Electric energy generated and used....do	[10]1	...	...	...		...			

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing granite at such operations was $45,000; this value has been included in the value of shipments and in value added in mining. The comparable value for sandstone is not available.

[2]Excludes data for common clay and shale and peat operations. There were 12 such mines in 1939 with products valued at between $63,000 and $173,000.

[3]Excludes data for one nonproducing establishment.

[4]Excludes data for one nonproducing operation. Includes data for lime plants producing lime valued at $204,000.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909 represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Figures for fuels, electric energy, and contract work for crushed and broken stone and clay, ceramic, and refractory minerals classified in manufactures are included with figures for supplies.

[10]Excludes statistics for crushed and broken stone and clay, ceramic, and refractory minerals operations classified in manufactures.

[11]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP AND INDUSTRY, 1954, AND SELECTED COMPARATIVE STATISTICS, 1954 and 1939

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION)

	Item	Connecticut, total		Dimension granite, trap rock, and stone, n.e.c. (including operations classified in manufactures)	Crushed and broken limestone, granite, and trap rock			Sand and gravel	Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Other industries[1]
					All industries					
		Including operations classified in manufactures	Mineral industries only		Including operations classified in manufactures	Mineral industries only	Trap rock (mineral industries only)			
1	Number of operating companies	96	83	11	18	15	11	47	11	10
2	Number of establishments	104	91	11	19	16	12	53	11	10
	Number of mines and quarries:									
3	1954	106	92	11	19	16	12	54	12	10
4	1939	63	(NA)	5	23	(NA)	18	20	13	2
5	Number of preparation plants	76	71	2	19	16	12	46	2	7
	Value of shipments:[2]									
6	1954 ..... $1,000	11,079	9,719	239	5,180	4,129	3,798	4,566	430	664
7	1939 ..... do	[3]2,962	(NA)	[3]163	1,941	(NA)	1,734	685	[4]63	[4]110
8	Value added in mining ..... do	9,228	8,003	206	4,285	3,338	3,151	3,810	379	548
9	Number of persons engaged, total	882	838	48	334	334	294	372	58	70
10	Production and development workers	647	605	37	253	253	220	270	51	36
11	All other employees	186	185	1	81	81	74	70	6	28
12	Proprietors and firm members	49	48	10	...	...	...	32	1	6
13	Performing manual labor	25	25	4	...	...	...	15	1	5
	Man-hours worked by production and development workers:									
14	1954 1,000	1,580	1,437	78	694	638	567	616	101	91
15	1939 ..... do	[3]1,370	(NA)	[3]131	807	(NA)	716	298	[4]35	[4]99
	At mines:									
16	Underground ..... do	5	5	...	4	4	4	...	...	1
17	Open-pit ..... do	730	638	49	271	237	205	305	75	30
18	Surface (mine shops, yards, etc.) ..... do	116	116	...	116	116	112	...	...	...
19	At preparation plants ..... do	729	678	29	303	281	246	311	26	60
20	Man-hours spent on development and exploration work (included above) ..... do	231	231	...	...	...	...	207	...	24
21	Principal expenses designated below, total $1,000	6,046	5,674	157	2,840	2,638	2,365	2,360	234	455
22	Wages of production and development workers ..... do	2,696	2,464	120	1,138	1,040	945	1,129	153	156
23	Salaries of all other employees ..... do	986	981	5	435	435	405	337	29	180
24	Minerals received for preparation ..... do	37	36	1	36	36	...	(NA)	...	...
25	Supplies ..... do	[5]1,354	1,226	15	1,231	657	584	476	52	70
	Purchased fuel:									
26	Coal ..... do	[5]2	1	1		...	...	1		...
27	Fuel oil ..... do	[5]125	123	3		48	48	48		26
28	Gas ..... do	[5]1	1	...		1	1	...		...
29	Other fuels ..... do	[5]260	257	10		59	43	182		8
30	Purchased electric energy ..... do	[5]283	283	2		149	126	99		14
31	Contract work ..... do	[5]302	302	...		213	213	88		1
32	Purchased machinery installed ..... do	[6]594	586	26	(NA)	101	99	436	(NA)	28
33	Capital expenditures, total ..... do	[6]1,107	1,099	25		473	467	574		31
34	Development and exploration of mineral property ..... do	[6]51	51	...		20	20	28		3
35	Preparation plant construction ..... do	[6]226	226	...		93	91	133		...
36	Other construction ..... do	[6]276	276	...		266	265	10		...
37	New machinery and equipment ..... do	[6]462	462	17		65	62	355		21
38	Used plant and equipment ..... do	[6]92	84	8		29	29	48		7
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[6]65	64	3		22	19	37		2
40	Per production worker	104	106	76		87	86	138		55
41	Prime movers 1,000	[6]49	48	3		12	10	32		2
42	Electric motors driven by purchased energy ..... do	[6]16	16	(7)		10	9	5		(7)
43	Horsepower rating of electric motors driven by energy generated at establishment ..... do	[6]1	1	(7)		...	...	1		...
44	Energy used ..... million kwh equivalent	[6]143	143	2		39	34	88		13
45	Coal ..... 1,000 short tons	[6]1	1	(7)		...	...	1		...
46	Fuel oil ..... 1,000 barrels	[6]40	40	(7)		12	12	18		10
47	Gas ..... million cu.ft	(7)	...	...		(7)	(7)	...		...
48	Electric energy purchased ..... million kwh	[6]12	12	...		6	5	4		1
49	Electric energy generated and used ..... do	1	1	...		...	...	1		...
50	Water intake, including mine water used ..... million gallons	(D)	3,425	(D)		99	99	3,226		100
51	Per production worker ..... do	(D)	5.66	(D)		0.45	0.45	11.95		2.78

[1]Represents Beryllium ores; Natural abrasives, except sand, n.e.c.; Nonmetallic minerals (except fuels) contract services; Mica, and Peat industries. [2]See table 1, footnote 6. [3]See table 1, footnote 1. [4]Figures for feldspar operations are included with those for "Other industries". [5]See table 1, footnote 9. [6]See table 1, footnote 10. [7]See table 1, footnote 11.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Connecticut, all mineral operations:									
Including operations in manufactures	104	11,079	9,228	647	186	1,580	2,696	986	1,015
Mineral industries only	91	9,719	8,003	605	185	1,437	2,464	981	1,015
Metal mining (beryllium ores)	2	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Nonmetallic minerals (except fuels) mining:									
Dimension stone (including operations in manufactures)	11	239	206	37	1	78	120	5	17
Crushed and broken stone:									
Including operations in manufactures	19	5,180	4,285	253	81	694	1,138	435	(NA)
Mineral industries only	16	4,129	3,338	253	81	638	1,040	435	444
Sand and gravel	53	4,566	3,810	270	70	616	1,129	337	526
Clay, ceramic, and refractory minerals (including operations in manufactures)	11	430	379	51	6	101	153	29	(NA)
Natural abrasives, except sand	1								
Nonmetallic minerals (except fuels) contract services	1	[2]664	[2]548	[2]36	[2]28	[2]91	[2]156	[2]180	[2]24
Miscellaneous nonmetallic minerals (except fuels)	6								
COUNTY									
Fairfield	10	1,437	1,223	76	35	175	327	365	104
Hartford:									
Including operations in manufactures	28	2,408	2,143	160	28	376	630	129	456
Mineral industries only	23	2,306	2,039	146	28	349	588	129	456
Crushed and broken stone	5	1,459	1,241	88	19	218	351	93	247
Sand and gravel	14	796	762	53	7	116	225	30	209
Clay, ceramic, and refractory minerals (included in manufactures)	5	[3]112	104	14	(NA)	27	42	(NA)	(NA)
Litchfield (mineral industries only)	9	721	476	63	23	155	204	88	8
Crushed and broken stone	3	365	243	33	6	72	111	29	6
Sand and gravel	6	356	233	30	17	83	93	59	2
Middlesex (mineral industries only)	13	446	354	45	12	97	150	57	31
Sand and gravel	5	162	126	12	6	30	49	23	19
New Haven (mineral industries only)	25	3,915	3,166	224	67	573	991	210	333
Crushed and broken stone	7	2,284	1,836	128	40	341	570	237	191
Sand and gravel	13	1,388	1,138	81	27	197	345	173	126
New London (mineral industries only)	5	646	511	33	3	77	135	11	6

[1] See table 1, footnote 6.

[2] Figures for Metal mining are included with those for Natural abrasives, except sand; Nonmetallic minerals (except fuels) contract services; and Miscellaneous nonmetallic minerals (except fuels).

[3] Represents the estimated value of production, based on reported quantity figures.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Connecticut, total	Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham
All operations, total	104	10	28	10	14	29	6	3	4
Classified in mineral industries	91	10	23	9	13	25	5	3	3
Included in manufactures	13	...	5	1	1	4	1	...	1
Metal mining (beryllium ores)	2	...	...	...	1	1	...	...	...
Nonmetallic minerals (except fuels) mining:									
Dimension stone:									
Granite:									
Classified in mineral industries	7	...	2	...	...	2	2	1	...
Included in manufactures	2	...	...	...	...	...	1	...	1
Trap rock	1	...	...	...	...	1	...	...	...
Stone, n.e.c.	1	...	...	...	...	...	...	1	...
Crushed and broken stone:									
Limestone:									
Classified in mineral industries	3	1	...	2	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...
Granite	1	...	...	...	...	1	...	...	...
Trap rock:									
Classified in mineral industries	12	...	5	1	...	6	...	...	...
Included in manufactures	2	...	...	...	...	2	...	...	...
Sand and gravel	53	9	14	6	5	13	2	1	3
Clay, ceramic, and refractory minerals:									
Feldspar	3	...	...	...	3	...	...	...	...
Clay, ceramic, refractory minerals, n.e.c. (included in manufactures)	8	...	5	...	1	2	...	...	...
Natural abrasives, except sand, n.e.c.	1	...	...	...	...	...	1	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	...	1	...	...	...
Miscellaneous nonmetallic minerals (except fuels):									
Mica	3	...	...	...	3	...	...	...	...
Peat	3	...	2	...	1	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Connecticut, all mineral operations:												
Including operations classified in manufactures	104	13	38	23	23	5	2	...	...	...	...	...
Mineral industries only	91	13	30	20	21	5	2	...	...	...	...	...
Metal mining (beryllium ores)	2	2	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	102	11	38	23	23	5	2	...	...	...	...	...
Mineral industries only	89	11	30	20	21	5	2	...	...	...	...	...
Dimension stone:												
Granite:												
Classified in mineral industries	7	1	5	1	...	...	...	...	...	...	...	...
Included in manufactures	2	...	1	...	1	...	...	...	...	...	...	...
Trap rock (classified in mineral industries)	1	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c. (classified in mineral industries)	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	3	...	...	1	2	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Granite (classified in mineral industries)	1	...	1	...	...	...	...	...	...	...	...	...
Trap rock:												
Classified in mineral industries	12	...	1	1	6	2	2	...	...	...	...	...
Included in manufactures	2	...	1	...	1	...	...	...	...	...	...	...
Sand and gravel	53	5	19	15	13	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Feldspar	3	1	...	1	...	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	8	...	6	2	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	1	...	...	...	...	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	1	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Mica	3	2	1	...	...	...	...	...	...	...	...	...
Peat	3	2	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Connecticut, total.....	605	8,003	1,611	2.66	201	1,605	1,814	79	5,778	...	59	29	12
Crushed and broken stone.....	253	3,338	65	0.26	19	65	34	29	136	3	...	97	...
Crushed and broken trap rock.	220	3,151	65	0.30	21	65	34	29	136	3	...	97	...
Sand and gravel.....	270	3,810	1,496	5.54	393	1,490	1,730	...	5,542	...	60	27	[2]13
Dimension stone; Clay, ceramic, and refractory minerals; and Other industries.....	82	855	50	0.61	58	50	50	50	100	...	100	...	...

[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]Represents "not specified".

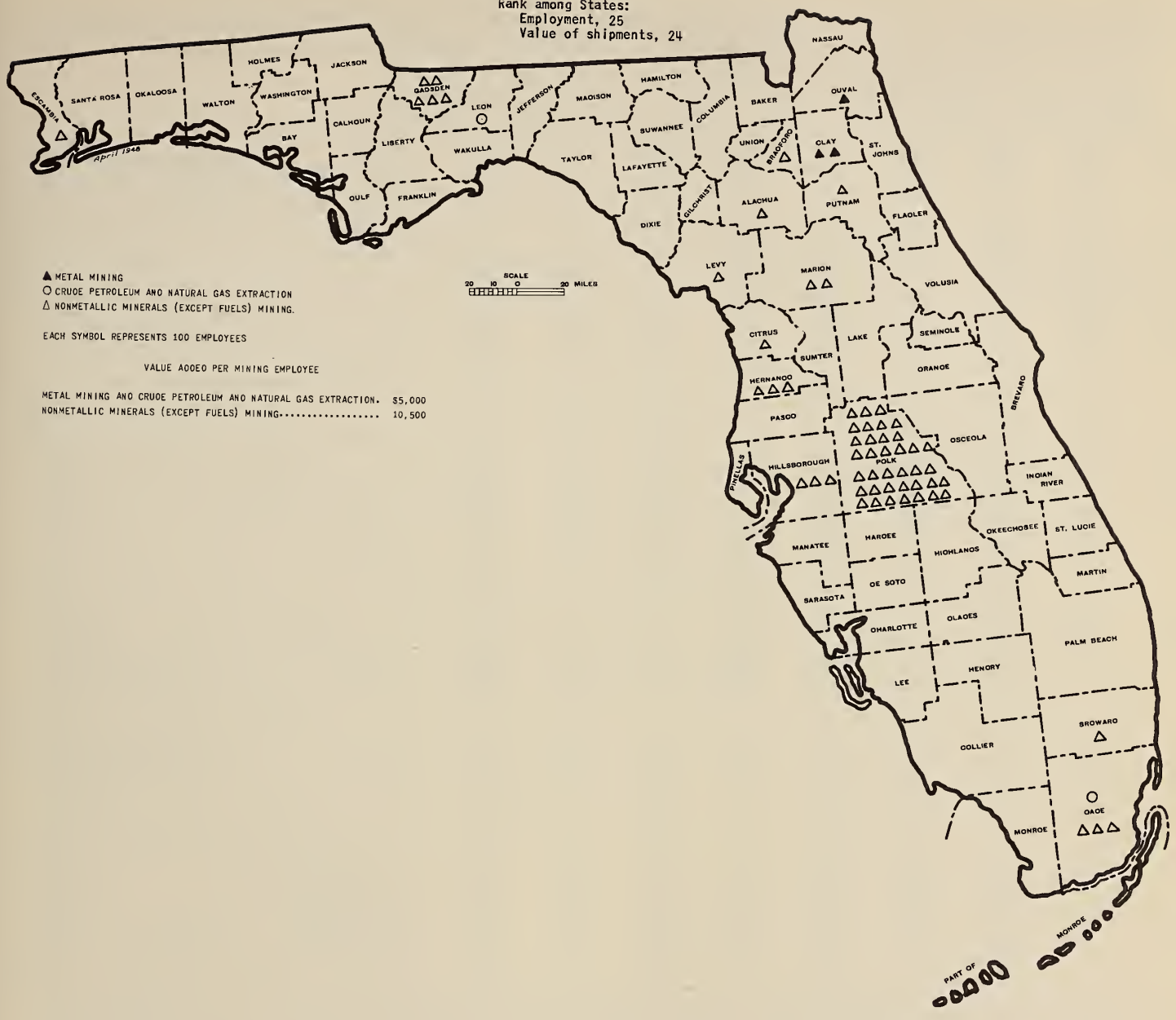
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FLORIDA

109-1

MINING IN FLORIDA: 1954

Rank among States:
Employment, 25
Value of shipments, 24



▲ METAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING.

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING AND CRUDE PETROLEUM AND NATURAL GAS EXTRACTION.	$5,000
NONMETALLIC MINERALS (EXCEPT FUELS) MINING.....	10,500



Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations					
	1954	1939[1]	1929[2]	1954	1939[1]	1929[3]	1919[4]	1909[4]	1902[5]
Number of operating companies	166	71	(NA)	116	[6]58	(NA)	(NA)	[6]36	[6]49
Number of establishments	199	(NA)	66	147	(NA)	57	36	36	(NA)
Number of mines and quarries	163	83	74	111	64	65	55	96	74
Number of oil and gas wells producing at end of year	13	...	(NA)	13	...	(NA)	...	...	...
Number of preparation plants	126	83	(NA)	89	67	(NA)	(NA)	(NA)	(NA)
Value of shipments[7] $1,000	126,550	11,231	14,015	122,737	10,563	13,525	8,976	8,847	2,944
Value added in mining ..... do	68,701	9,598	10,112	65,775	7,627	9,740	5,332	6,667	2,306
Number of persons engaged, total	6,993	3,496	3,583	6,604	3,281	3,449	3,694	5,527	3,384
Production and development workers	5,625	3,083	3,173	5,318	2,902	3,061	3,372	5,214	[8]3,161
All other employees	1,264	385	[9]394	1,224	357	[9]372	314	304	233
Proprietors and firm members	104	28	16	62	22	16	8	9	(NA)
Performing manual labor	36	6	(NA)	19	5	(NA)	2	...	(NA)
Man-hours worked by production and development workers 1,000	13,137	6,017	(NA)	12,363	5,591	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total $1,000	88,840	6,278	8,042	86,778	5,919	7,769	7,418	5,027	1,959
Wages of production and development workers ..... do	19,956	2,415	3,152	19,018	2,248	3,046	3,108	2,351	1,087
Salaries of all other employees ..... do	6,470	775	[9]987	6,313	735	[9]938	666	496	234
Minerals received for preparation ..... do	32,291	(NA)	(NA)	32,291	(NA)	(NA)	...	...	(NA)
Supplies ..... do	14,978	1,455	1,765	14,512	1,359	1,721	1,836	739	
Fuel[10] ..... do	4,005	774	963	3,797	734	918	1,613	1,223	631
Purchased electric energy ..... do	6,187	816	1,147	6,102	810	1,118	74		
Contract work ..... do	4,953	43	28	4,745	33	28	121	218	7
Purchased machinery installed ..... do	11,071		766	10,856		757	(NA)		
Capital expenditures, total ..... do	15,636	(NA)	(NA)	15,341	(NA)	(NA)	(NA)		
Development and exploration of mineral property ..... do	517		244	515		244	302	(NA)	(NA)
Preparation plant construction ..... do	4,757	146		4,657	143				
Other construction ..... do	609		(NA)	605		(NA)	(NA)		
New machinery and equipment ..... do	9,470	277		9,319	270				
Used plant and equipment ..... do	283	54		245	48				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	415	117	110	394	113	106	45	42	10
Per production worker	74	38	35	74	39	35	13	8	3
Prime movers 1,000	175	44	52	159	41	49	43	42	10
Electric motors driven by purchased energy ..... do	240	73	58	235	72	57	2	...	...
Horsepower rating of electric motors driven by energy generated at establishment ..... do	17	34	32	17	34	32	32	12	1
Energy used[11] ..... million kwh equivalent	3,094	1,046	1,471	3,024	1,017	1,439	(NA)		
Coal ..... 1,000 short tons	5	12	36	5	12	33	33		
Fuel oils ..... 1,000 barrels	1,288	490	628	1,263	475	627	787	(NA)	(NA)
Gas ..... million cu.ft	34	...	...	34	...	...	...		
Electric energy purchased ..... million kwh	668	95	107	663	95	106	(NA)		
Electric energy generated and used ..... do	49	33	52	49	33	52	(NA)		

NA Not available.

[1]Except for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing limestone at such operations was $57,000; this value has been included in the value of shipments and value added in mining. Excludes data for 2 nonproducing operations.

[2]Excludes data for common clay and shale and peat operations and for one nonproducing limestone operation. There were 4 such clay and peat mines in 1939, with products of the 3 clay operations valued at $25,000.

[3]Excludes data for peat and for nonproducing operations. See also footnote 2.

[4]Excludes data for stone quarries operated as part of cement and lime plants, if any. There were 2 such quarries in 1929. Also, excludes data for nonproducing phosphate rock operations: for 1919, 1 mine; for 1909, 2 mines.

[5]Includes data for lime plants producing lime valued at $38,000.

[6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[10]For 1954, represents the cost of purchased fuels only. For earlier years, includes the value of fuels produced and used in the same establishment for power or heat.

[11]Represents both purchased fuels and fuels produced and used in the same establishment.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Florida, total		Metal mining and Crude petroleum and natural gas extraction	Nonmetallic minerals (except fuels) mining, total	
		Including operations classified in manufactures	Mineral industries only		Including operations classified in manufactures	Mineral industries only
1	Number of operating companies	166	160	27	140	134
2	Number of establishments	199	193	32	167	161
	Number of mines, quarries, and producing oil and gas wells:					
3	1954	176	174	19	157	155
4	1939[1]	83	(NA)	...	83	(NA)
5	Number of preparation plants	126	126	4	122	122
	Value of shipments:[3]					
6	1954 $1,000	126,550	124,839	[4]5,822	120,728	119,017
7	1939[1] do	11,231	(NA)	([2])	[2]11,231	(NA)
8	Value added in mining do	[4]68,701	[4]67,365	[4]3,717	64,984	63,648
9	Number of persons engaged, total	6,993	6,900	756	6,237	6,144
10	Production and development workers	5,625	5,532	363	5,262	5,169
11	All other employees	1,264	1,264	377	887	887
12	Proprietors and firm members	104	104	16	88	88
13	Performing manual labor	36	36	2	34	34
	Man-hours worked by production and development workers:					
14	1954 1,000	13,137	12,951	872	12,265	12,079
15	1939[1] do	6,017	(NA)	([2])	[2]6,017	(NA)
	At mines:					
16	Underground do	...	...	...	...	...
17	Open-pit do	4,306	4,123	[5]154	4,152	3,969
18	Surface (mine shops, yards, etc.) do	2,040	2,040	207	1,833	1,833
19	At preparation plants do	6,525	6,522	245	6,280	6,277
20	At oil and gas field operations do	266	266	266	xxx	xxx
21	Man-hours spent on development and exploration work (included above) do	627	627	289	338	338
22	Principal expenses designated below, total $1,000	88,840	88,121	8,248	80,592	79,873
23	Wages of production and development workers do	19,956	19,610	1,485	18,471	18,125
24	Salaries of all other employees do	6,470	6,470	1,902	4,568	4,568
25	Minerals received for preparation do	32,291	32,291	79	32,212	32,212
26	Supplies do	14,978	14,606	1,885	[7]13,093	12,721
	Purchased fuel:					
27	Coal do	61	61	42	[7]19	19
28	Fuel oil do	3,374	3,374	65	[7]3,309	3,309
29	Gas do	...	...	...	...	...
30	Other fuels do	570	570	67	[7]503	503
31	Purchased electric energy do	6,187	6,187	409	[7]5,778	5,778
32	Contract work do	4,953	4,952	2,314	[7]2,639	2,638
33	Purchased machinery installed do	11,071	11,067	2,250	[8]8,821	8,817
34	Capital expenditures, total do	15,636	15,634	5,006	10,630	10,628
35	Development and exploration of mineral property do	517	517	359	[8]158	158
36	Preparation plant construction do	4,757	4,757	2,328	[8]2,429	2,429
37	Other construction do	609	609	361	[8]248	248
38	New machinery and equipment do	9,470	9,470	1,951	[8]7,519	7,519
39	Used plant and equipment do	283	281	7	[8]276	274
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	415	415	31	[8]384	384
41	Per production worker	74	75	85	73	74
42	Prime movers 1,000	175	175	17	[8]158	158
43	Electric motors driven by purchased energy do	240	240	14	[8]226	226
44	Horsepower rating of electric motors driven by energy generated at establishment do	17	17	1	16	16
45	Energy used million kwh equivalent	3,094	3,094	112	[8]2,982	2,982
46	Coal 1,000 short tons	5	5	4	[8]1	1
47	Fuel oil 1,000 barrels	1,288	1,288	19	[8]1,269	1,269
48	Gas million cu.ft	[10]34	[10]34	[10]34	...	...
49	Electric energy purchased million kwh	668	668	24	[8]644	644
50	Electric energy generated and used do	49	49	([9])	[8]49	49
51	Water intake, including mine water used million gallons	70,384	70,384	2,055	[8]68,329	68,329
52	Per production worker do	12.51	12.72	5.66	12.99	13.22

NA Not available.

[1]See table 1, footnote 1.

[2]Data for one preparation plant in the Bauxite industry and for one diatomite mine and preparation plant are included with those for the Peat industry.

[3]See table 1, footnote 7.

[4]Excludes data for value of shipments of the Uranium-radium-vanadium ores industry.

[5]Represents man-hours for dredging operations.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued								
Dimension stone (including operations classified in manufactures)	Crushed and broken stone: Including operations classified in manufactures	Crushed and broken stone: Limestone (mineral industries only)	Sand and gravel	Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Phosphate rock	Nonmetallic minerals (except fuels) contract services	Peat	
4	51	43	47	7	19	5	8	1
4	61	53	48	8	33	5	8	2
4	57	53	48	12	28	...	8	3
3	31	(NA)	16	8	23	...	[2]2	4
...	42	41	36	6	30	...	8	5
32	16,416	14,805	3,246	5,859	94,441	566	168	6
92	1,782	(NA)	643	676	7,975	19	[2]44	7
27	11,708	10,469	2,421	4,218	46,015	459	136	8
6	1,235	1,135	366	530	3,963	86	51	9
5	1,096	999	286	477	3,283	72	43	10
...	120	120	38	53	665	7	4	11
1	19	16	42	...	15	7	4	12
...	8	8	17	...	6	2	1	13
8	2,800	2,607	745	1,004	7,495	135	78	14
10	1,375	(NA)	393	467	3,716	22	[2]34	15
...	...	...	...	...	...	...	...	16
5	1,173	986	[6]304	248	2,342	27	53	17
...	479	479	...	8	1,238	108	...	18
3	1,148	1,142	441	748	3,915	...	25	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
...	45	45	1	42	225	25	...	21
16	8,599	7,891	1,940	3,255	66,321	337	124	22
13	3,654	3,306	889	1,265	12,352	217	81	23
...	586	586	147	359	3,443	23	10	24
...	...	...	(NA)	...	32,212	...	...	25
1		2,115	415	[7]755	9,363	80	9	26
...		17	...	...	2	...	...	27
([9])	4,359	258	113	[7]417	2,513	7	...	28
...		...	...	...	...	...	...	29
...		226	89	[7]70	86	10	20	30
1		369	79	[7]219	5,108	([9])		31
1		1,014	208	[7]170	1,242	...	4	32
4		2,311	214	[8]345	5,902	22	9	33
2		1,974	293	[8]335	8,002	12	10	34
...		23	2	[8]2	131	...	...	35
...		167	100	[8]43	2,119	...	...	36
...		102	4	[8]11	128	...	3	37
...		1,454	149	[8]278	5,618	11	7	38
2		228	38	[8]1	6	1	...	39
([9])		69	19	[8]24	264	3	4	40
xxx		69	67	50	80	48	82	41
([9])	(NA)	52	15	[8]11	73	2	4	42
([9])		17	4	[8]13	191	1	([9])	43
...		...	...	...	16	...	...	44
1		178	66	[8]283	2,445	4	5	45
...		([9])	...	...	1	...	...	46
([9])		58	23	[8]146	1,041	1	...	47
...		...	...	...	...	...	...	48
1		22	4	[8]17	600	([9])	([9])	49
..		...	...	...	49	...	...	50
...		9,582	1,962	[8]67	56,718	...	...	51
...		[9].59	6.86	0.14	17.28	...	...	52

[6]Includes 97,000 man-hours "on floating equipment."
[7]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figures for supplies.
[8]Excludes data for crushed stone and clay operations classified in manufactures.
[9]Less than one-half of the unit of measure specified.
[10]Represents gas produced and used for fuel at the same establishment.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capitel expenditures ($1,000)
Florida, ell minerel operetions:									
Including operetions in manufectures	199	126,550	68,701	5,625	1,264	13,137	19,956	6,470	[3]15,353
Mineral industries only	193	124,839	67,365	5,532	1,264	12,951	19,610	6,470	15,353
Metal mining end Crude petroleum and neturel ges extraction[1]	32	[2]5,822	[2]3,717	363	377	872	1,485	1,902	4,999
Nonmetallic minerals (except fuels) mining:									
Including operetions in manufactures	167	120,728	64,984	5,262	887	12,265	18,471	4,568	[3]10,354
Minerel industries only	161	119,017	63,648	5,169	887	12,079	18,125	4,568	10,354
Dimension stone (including operetions in menufectures)	4	32	27	5	...	8	13	...	...
Crushed end broken stone (including operations in menufactures)	61	16,416	11,708	1,096	120	2,800	3,654	586	[3]1,748
Send end grevel	48	3,246	2,421	286	38	745	889	147	255
Clay, ceremic, end refractory minerals (including operetions in menufectures)	8	5,859	4,218	477	53	1,004	1,265	359	[3]334
Phosphate rock	33	94,441	46,015	3,283	665	7,495	12,352	3,443	7,996
Nonmetellic minerals (except fuels) contrect services	5	566	459	72	7	135	217	23	11
Peet	8	168	136	43	4	78	81	10	10
COUNTY									
Browerd (minerel industries only)	9	2,038	1,604	80	15	225	317	72	178
Citrus	9	1,053	758	113	12	295	294	65	5
Collier	4	(NA)	(NA)	[4]26	([4])	(NA)	(NA)	(NA)	(NA)
Dede (including operetions in manufectures):									
Including crude petroleum and naturel gas	27	(NA)	(NA)	[4]355	([4])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and neturel ges	24	5,079	3,197	263	43	731	1,074	250	782
Crude petroleum and natural gas[5]	3	(NA)	(NA)	[4]49	([4])	(NA)	(NA)	(NA)	(NA)
Crushed end broken stone	16	4,738	2,903	236	37	666	953	226	782
Send and gravel	5	316	274	22	6	57	109	24	...
Escembie	6	390	([6])	[4]77	([4])	99	[4]234	([4])	56
Gedsden (minerel industries only)	5	5,330	3,627	457	54	1,007	1,235	390	314
Hernando	4	4,491	3,331	314	25	830	1,133	122	427
Hillsborough (minerel industries only)	6	(D)	(D)	251	12	(D)	(D)	(D)	(D)
Leon	7	(NA)	(NA)	[4]52	([4])	(NA)	(NA)	(NA)	(NA)
Levy	6	774	601	71	5	151	145	25	52
Merion	6	1,228	890	144	20	340	319	81	67
Palm Beach	8	422	359	37	2	77	131	4	6
Polk	28	90,674	43,463	3,045	694	6,988	11,592	3,551	7,960
Phosphate rock	19	89,118	42,157	2,936	645	6,661	11,171	3,322	7,789
Putnam	9	911	654	114	15	243	314	50	33

D Withheld to avoid approximately disclosing data for individual companies.

NA Not eveileble.

[1]In generel, compenies in the Crude petroleum and Naturel ges industries mede only one report for ell oil end ges field operations in eech Stete. The only dete by county which these reports conteined were number of employees on Merch 15, 1954, end quantity of crude petroleum produced. In only e few ceses wes it possible to ellocate entire reports by county. The Stete totel figure shown for number of establishments represents the number of Stete reports received end that shown for number of esteblishments in e county represents the number of reports thet indicated eny operetions in the specified county. Contrectors were requested to prepere one report for ell oil end ges field contrect services performed in the United Stetes. These reports were clesseified on the basis of the principel Stete in which the service was performed. No dete on the distribution of contrect activities by county were obteined unlese the compeny was also engeged in crude petroleum or nsturel ges production. The employee distribution for such compenies ie included with the county dete for the Crude petroleum and Neturel ges industries.

[2]See teble 2, footnote 4.

[3]See teble 2, footnote 8.

[4]Figures for "All other employees" ere included with those for "Production end development workers."

[5]In addition to dete for eetebliehments clessified in the Crude petroleum end Naturel ges industries, includes dete for some esteblishments clesaified in the Oil and ges field contract services industries which showed oil or gas production es e secondary activity.

[6]Not ehown eince the combined coet of eupplies, fuel, purchased electric energy, contrect work, and purchased machinery instelled enceeded the velue of ehipmente plus cepitel expendituree.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Florida, total	Alachua	Bay	Bradford	Brevard	Broward	Citrus	Clay	Collier	Columbia
All operations, total	199	4	2	1	3	10	9	2	4	1
Classified in mineral industries	193	4	2	1	3	9	9	2	4	1
Included in manufactures	6	...	...	...	...	1	...	...	...	...
Metal mining:										
Titanium ores	6	...	...	1	1	...	...	1	...	...
Uranium-radium-vanadium ores	1	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum[1]	22	...	...	...	...	...	...	...	3	...
Oil and gas field contract services[1]	3	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	2	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	53	3	...	...	...	8	...	...	1	...
Included in manufactures	4	...	...	...	...	1	...	...	...	...
Stone, n.e.c.	4	1	...	...	...	...	...	...	...	...
Sand and gravel:										
Common sand and gravel	47	...	2	...	2	1	...	...	...	...
Foundry sand	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fuller's earth	3	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	2	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	2	...	...	...	...	...	...	1	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...
Phosphate rock	33	...	...	...	...	...	7	...	...	1
Nonmetallic minerals (except fuels) contract services	5	...	...	...	...	...	2	...	...	...
Peat	8	...	...	...	...	...	...	...	...	...

	Dade	De Soto	Duval	Escambia	Flagler	Gadsden	Gilchrist	Hardee	Hernando	Hillsborough
All operations, total	27	1	1	6	1	7	2	1	4	8
Classified in mineral industries	26	1	1	6	...	7	2	1	4	6
Included in manufactures	1	...	...	...	1	...	...	...	...	2
Metal mining:										
Titanium ores	...	...	1	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	...	...	...	...	...	...	...	...	...	1
Crude petroleum and natural gas extraction:										
Crude petroleum[1]	3	1	...	1	...	2	...	...	...	...
Oil and gas field contract services[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	14	...	...	...	...	...	...	...	4	...
Included in manufactures	...	...	...	...	1	...	...	...	...	1
Stone, n.e.c.	2	...	...	...	...	...	...	...	...	...
Sand and gravel:										
Common sand and gravel	5	...	...	4	...	1	...	...	...	1
Foundry sand	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fuller's earth	...	...	...	...	...	3	...	...	...	...
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	1	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	1
Phosphate rock	...	...	...	...	...	...	2	...	...	2
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	1	...	1	...	...
Peat	...	...	...	...	...	...	...	...	...	2

NA Not available.
[1]See table 3, footnote 1.

Table 4. --NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Indian River	Jackson	Lafayette	Lake	Lee	Leon	Levy	Manatee	Marion	Monroe	Okaloosa
All operations, total	2	1	2	2	1	7	6	5	6	2	1
Classified in mineral industries	2	1	2	2	1	7	6	5	6	1	1
Included in manufactures	...	...	...	...	...	...	...	...	...	1	...
Metal mining:											
Titanium ores	1	...	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:											
Crude petroleum[1]	...	...	...	...	1	4	...	...	...	...	...
Oil and gas field contract services[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:											
Dimension stone:											
Limestone:											
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:											
Limestone:											
Classified in mineral industries	...	1	1	...	...	...	6	3	4	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	1	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	1	...
Sand and gravel:											
Common sand and gravel	1	...	1	2	...	3	...	2	...	...	1
Foundry sand	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:											
Fuller's earth	...	...	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:											
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Phosphate rock	...	...	...	...	...	...	...	...	2	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...

County	Orange	Palm Beach	Pinellas	Polk	Putnam	St. Johns	St. Lucie	Sarasota	Sumter	Volusia	Walton
All operations, total	4	8	2	28	9	1	2	1	2	4	1
Classified in mineral industries	4	8	2	28	9	1	2	1	2	4	1
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Metal mining:											
Titanium ores	...	...	...	...	1	...	...	...	...	...	...
Uranium-radium-vanadium ores	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:											
Crude petroleum[1]	...	...	...	...	...	...	1	...	...	...	1
Oil and gas field contract services[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:											
Dimension stone:											
Limestone:											
Classified in mineral industries	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:											
Limestone:											
Classified in mineral industries	...	3	...	...	...	...	...	1	2	1	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:											
Common sand and gravel	1	3	2	8	4	1	1	...	...	2	...
Foundry sand	...	...	...	...	...	...	...	...	...	1	...
Clay, ceramic, and refractory minerals:											
Fuller's earth	...	...	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	...	...	...	...	2	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:											
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Phosphate rock	...	...	...	19	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	1	...	...	...	...	...	...	...
Peat	3	1	...	...	2	...	...	...	...	...	...

NA Not available.
[1]See table 3, footnote 1.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Florida, all mineral operations:												
Including operations classified in manufactures	199	21	48	34	39	26	10	16	4	1	...	...
Mineral industries only	193	21	47	33	38	23	10	16	4	1	...	...
Metal mining, total	7	...	...	1	3	...	...	3	...	...	...	...
Titanium ores	6	...	...	...	3	...	...	3	...	...	...	...
Uranium-radium-vanadium ores	1	...	...	1	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	25	10	4	3	2	5	1	...	...	...	...	...
Crude petroleum	22	9	4	3	1	4	1	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	1	...	...	...	...	1	...	...	...	...	...	...
Oil and gas field contract services, n.e.c.	2	1	...	...	1	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	167	11	44	30	34	21	9	13	4	1	...	...
Mineral industries only	161	11	43	29	33	18	9	13	4	1	...	...
Dimension stone:												
Limestone:												
Classified in mineral industries	2	1	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c. (classified in mineral industries)	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	53	...	10	9	17	13	3	1	...	...	...	...
Included in manufactures	4	...	...	...	1	3	...	...	...	...	...	...
Stone, n.e.c.	4	...	3	1	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	47	4	21	9	10	3	...	...	...	...	...	...
Foundry sand	1	...	...	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fuller's earth	3	...	...	...	1	...	...	1	1	...	...	...
Kaolin and ball clay	2	...	...	...	1	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	2	...	...	1	1	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Phosphate rock	33	6	3	2	1	...	6	11	3	1	...	...
Nonmetallic minerals (except fuels) contract services	5	...	2	1	1	1	...	...	...	...	...	...
Peat	8	...	2	5		...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Florida, total	5,532	[2]67,365	42,990	7.77	638	42,292	27,394	2,256	160,633	([3])	23	67	10
Metal mining and Crude petroleum and natural gas extraction	363	[2]3,717	2,055	5.66	552	53	...	...	15,985	...	1	98	1
Nonmetallic minerals (except fuels) mining, total	5,169	63,648	40,935	7.92	643	42,239	27,394	2,256	144,648	([3])	24	66	10
Crushed and broken limestone	999	10,469	5,928	5.93	566	5,926	3,654	2,148	9,583	...	97	1	[4]2
Sand and gravel	286	2,421	525	1.84	217	516	1,437	...	2,732	...	91	3	[4]6
Phosphate rock	3,283	46,015	34,415	10.48	748	35,730	22,303	...	131,223	...	10	78	12
Nonmetallic minerals (except fuels) contract services	72	459	...	...	...	...	...	...	...	...	...	...	...
Peat	43	136	...	...	...	...	...	108	...	...	...	...	...
Other industries	486	4,148	67	0.14	16	67	...	...	1,110	12	45	43	...

[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]See table 2, footnote 4.
[3]Less than 0.5 percent.
[4]Represents "not specified."

GEORGIA

110-1

MINING IN GEORGIA: 1954

Rank among States:
Employment, 29
Value of shipments, 32

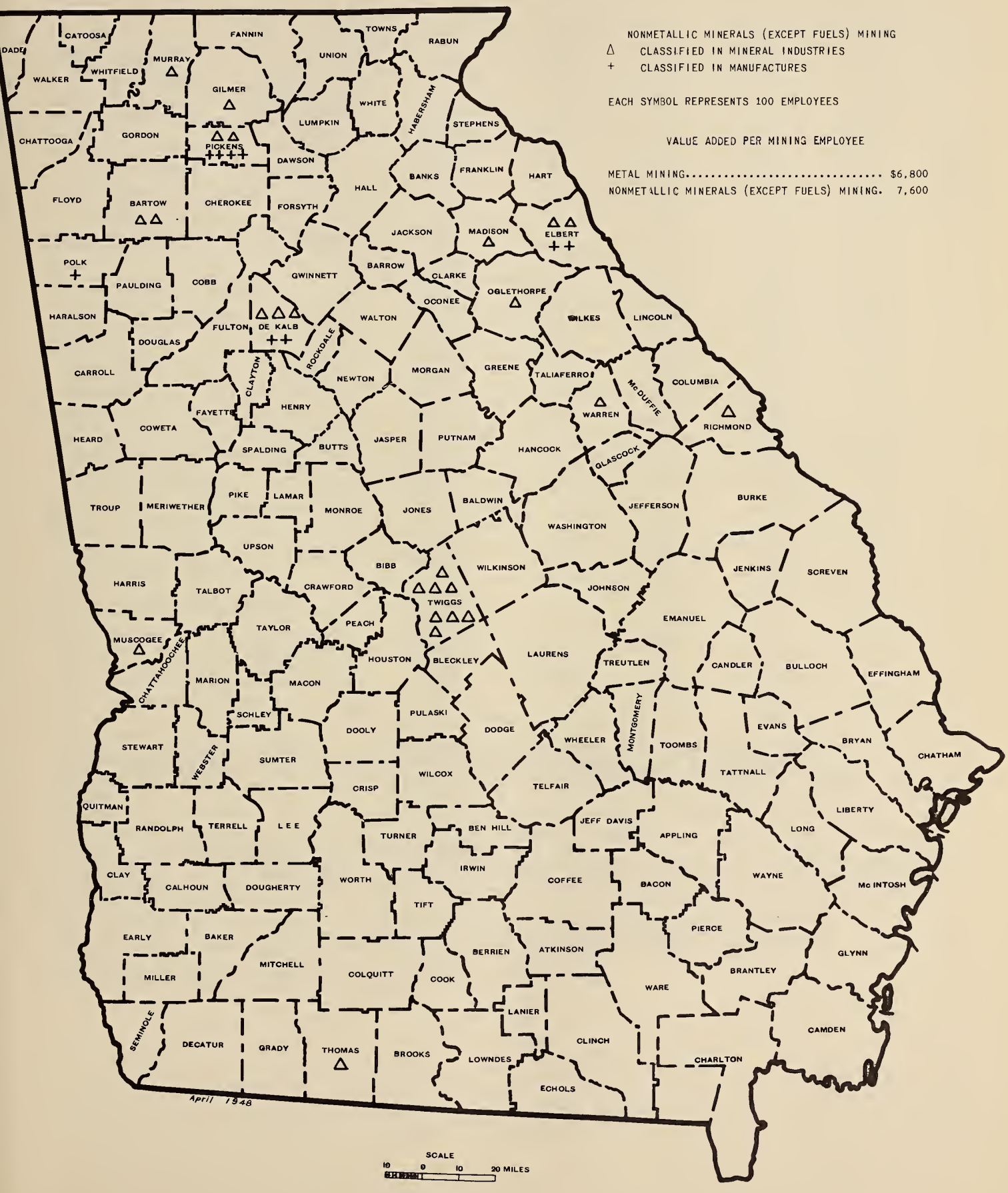




Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	1954	1939[1]	1929[2]	1919[3]	1909[3]	1902[4]
Number of operating companies	192	96	(NA)	(NA)	[5]92	[5]136
Number of establishments	220	(NA)	82	74	94	(NA)
Number of mines and quarries	207	106	89	82	109	158
Number of oil and gas wells producing at end of year	...	...	(NA)	...	...	...
Number of preparation plants	138	61	(NA)	(NA)	(NA)	(NA)
Value of shipments[6]...$1,000	49,066	8,198	9,611	4,082	2,875	3,117
Value added in mining...do	37,326	5,864	7,473	3,100	2,472	2,421
Number of persons engaged, total	5,437	3,950	4,057	2,608	3,664	3,171
Production and development workers	4,782	3,674	3,752	2,397	3,411	[7]2,860
All other employees	504	232	[8]274	178	195	311
Proprietors and firm members	151	44	31	33	58	(NA)
Performing manual labor	77	18	(NA)	4	12	(NA)
Man-hours worked by production and development workers...1,000	10,490	7,440	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	29,860	5,142	5,785	3,372	1,871	2,015
Wages of production and development workers...do	13,016	2,279	2,969	2,017	1,278	1,101
Salaries of all other employees...do	2,726	529	[8]678	355	190	218
Minerals received for preparation...do	647	(NA)	(NA)	18	...	(NA)
Supplies...do	[9]8,944	1,269	977	591	254	
Purchased fuel...do	[9]1,830	587	546	297	147	573
Purchased electric energy...do	[9]1,386	348	269	59		
Contract work...do	[9]1,311	130	346	35	2	123
Purchased machinery installed...do	[10]4,309		188	(NA)		
Capital expenditures, total...do	[10]6,687	(NA)	(NA)	(NA)		
Development and exploration of mineral property...do	[10]245		193	78	(NA)	(NA)
Preparation plant construction...do	[10]1,267	240				
Other construction...do	[10]772		(NA)	(NA)		
New machinery and equipment...do	[10]3,918	997				
Used plant and equipment...do	[10]485	82				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	[10]176	49	36	13	11	10
Per production worker	37	13	10	5	3	3
Prime movers...1,000	[10]111	22	19	9	11	10
Electric motors driven by purchased energy...do	[10]65	27	17	4	([11])	([11])
Horsepower rating of electric motors driven by energy generated at establishment...do	[10]1	2	3	4	([11])	([11])
Energy used...million kwh equivalent	[10]1,339	770	952	(NA)		
Coal...1,000 short tons	[10]8	32	98	55		
Fuel oils...1,000 barrels	[10]144	61	93	([11])		
Gas...million cu.ft	[10]2,620	1,193	...	...	(NA)	(NA)
Electric energy purchased...million kwh	[10]126	28	21	(NA)		
Electric energy generated and used...do	[10]1	4	5	(NA)		

NA Not available.

[1]Excludes data for dimension stone dressing plants operated in conjunction with quarries and for one nonproducing bauxite mine.

[2]Excludes data for common clay and shale operations. There were 11 such mines in 1939 with products valued at $168,000.

[3]Excludes data for sand, gravel, common clay, and shale operations; limestone quarries operated as part of cement and lime plants; and for nonproducing establishments. There were 3 such limestone quarries in 1929 and the value of products of such sand and gravel operations in 1929 was $172,000.

[4]Excludes data for sand, gravel, common clay, and shale operations. Includes data for 2 cement plants and for lime plants producing lime valued at $72,000.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[10]Excludes figures for crushed stone and clay operations classified in manufactures.

[11]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Georgia, total		Metal mining	Bituminous coal	Crude petroleum and natural gas extraction	Nonmetallic minerals (except fuels) mining			
							Total		Dimension stone	
									All stone	
		Including operations classified in manufactures	Mineral industries only				Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures	Mineral industries only
1	Number of operating companies	192	168	16	5	10	162	138	30	20
2	Number of establishments	220	192	20	5	10	185	157	34	23
	Number of mines, quarries, and producing oil and gas wells:									
3	1954	207	179	19	5	...	183	155	34	23
4	1939	[1]106	(NA)	[1]12	2	...	[2]92	(NA)	16	(NA)
5	Number of preparation plants	138	127	14	...	xxx	124	113	11	...
	Value of shipments:[3]									
6	1954.....$1,000	49,066	43,439	1,645	43	[4]196	47,182	41,555	5,635	2,088
7	1939.....do	[1]8,198	(NA)	194	([5])	...	[1 5]8,004	(NA)	[1 5]609	(NA)
8	Value added in mining.....do	37,326	32,724	1,024	33	([6])	36,458	31,856	4,516	1,630
9	Number of persons engaged, total	5,437	4,497	178	14	19	5,226	4,286	1,096	383
10	Production and development workers	4,782	3,928	133	9	14	4,626	3,772	986	359
11	All other employees	504	426	17	...	3	484	406	85	7
12	Proprietors and firm members	151	143	28	5	2	116	108	25	17
13	Performing manual labor	77	72	22	4	2	49	44	9	4
	Man-hours worked by production and development workers:									
14	1954.....1,000	10,490	8,783	280	15	28	10,167	8,460	1,918	666
15	1939.....do	[1]7,440	(NA)	[1]231	([5])	...	[1 5]7,209	(NA)	[1 5]751	(NA)
	At mines:									
16	Underground.....do	375	213	7	15	...	353	191	165	3
17	Open-pit.....do	3,535	2,846	170	...	...	3,365	2,676	849	615
18	Surface (mine shops, yards, etc.).....do	483	454	25	...	...	458	429	77	48
19	At preparation plants.....do	6,069	5,242	78	...	xxx	5,991	5,164	827	...
20	At oil and gas field operations.....do	28	28	xxx	xxx	28	xxx	xxx	xxx	
21	Man-hours spent on development and exploration work (included above).....do	184	184	[2]	...	28	152	152	...	...
22	Principal expenses designated below, total.....$1,000	29,860	26,374	1,128	29	476	28,227	24,741	3,860	1,271
23	Wages of production and development workers.....do	13,016	10,957	321	19	62	12,614	10,555	2,284	758
24	Salaries of all other employees.....do	2,726	2,340	74	...	14	2,638	2,252	417	31
25	Minerals received for preparation.....do	647	613	249	...	xxx	[10]398	364	34	...
26	Supplies.....do	[8]8,944	8,101	234	10	106	[8]8,594	7,751	798	319
	Purchased fuel:									
27	Coal.....do	[8]65	65	...	...	...	[8]65	65	2	2
28	Fuel oil.....do	[8]635	624	50	...	10	[8]575	564	22	11
29	Gas.....do	[8]716	714	...	...	...	[8]716	714	4	2
30	Other fuels.....do	[8]414	389	61	...	5	[8]348	323	44	19
31	Purchased electric energy.....do	[8]1,386	1,274	10	...	...	[8]1,376	1,264	211	99
32	Contract work.....do	[8]1,311	1,297	129	...	279	[8]903	889	44	30
33	Purchased machinery installed.....do	[10]4,309	4,192	220	...	...	[10]4,089	3,972	211	94
34	Capital expenditures, total.....do	[10]6,687	6,554	332	...	15	[10]6,340	6,207	251	118
35	Development and exploration of mineral property.....do	[10]245	245	66	...	15	[10]164	164	16	16
36	Preparation plant construction.....do	[10]1,267	1,246	63	...	...	[10]1,204	1,183	21	...
37	Other construction.....do	[10]772	771	...	...	...	[10]772	771	11	10
38	New machinery and equipment.....do	[10]3,918	3,818	147	...	...	[10]3,771	3,671	166	66
39	Used plant and equipment.....do	[10]485	474	56	...	...	[10]429	418	37	26
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	[10]176	164	12	...	...	[10]164	152	22	10
41	Per production worker	37	42	90	...	...	35	40	22	28
42	Prime movers.....1,000	[10]111	106	12	...	...	[10]99	94	11	6
43	Electric motors driven by purchased energy.....do	[10]65	58	([12])	...	...	[10]65	58	11	4
44	Horsepower rating of electric motors driven by energy generated at establishment.....do	[10]1	([12])	([12])	...	...	[10]1	...	...	...
45	Energy used.....million kwh equivalent	[10]1,339	1,317	41	...	4	[10]1,294	1,272	39	17
46	Coal.....1,000 short tons	[10]8	8	...	...	...	[10]8	8	([12])	([12])
47	Fuel oil.....1,000 barrels	[10]144	142	12	...	2	[10]130	128	4	2
48	Gas.....million cu.ft	[10]2,620	2,607	...	...	...	[10]2,620	2,607	22	9
49	Electric energy purchased.....million kwh	[10]126	118	6	...	...	[10]120	112	14	6
50	Electric energy generated and used.....do	[10]1	1	...	...	...	[10]1	1	...	...
51	Water intake, including mine water used.....million gallons	[10]6,480	6,412	364	...	...	[10]6,116	6,048	145	(D)
52	Per production worker.....do	1.36	1.63	2.74	...	...	1.32	1.60	0.15	(D)

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. xxx Not applicable. [1]See table 1, footnote 1. [2]Includes 1 asbestos mine for which a figure is not shown separately by industry or industry group. [3]See table 1, footnote 6. [4]Represents receipts for contract services only. [5]Figures for 2 bituminous coal mines, 1 dimension marble quarry, 1 asbestos mine, and 1 mica mine are included with those for clay, ceramic, and refractory minerals. [6]Not shown since the cost of supplies, purchased fuel, purchased electric

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued											
Dimension stone—Con.	Crushed and broken stone			Sand and gravel	Clay, ceramic, and refractory minerals			Natural abrasives, Chemical and fertilizer mineral mining, and Nonmetallic minerals (except fuels) mining contract services	Miscellaneous nonmetallic minerals (except fuels)		
	All stone		Granite (mineral industries only)		All clay		Kaolin and ball clay (mineral industries only)		Mica	Talc, soapstone, and pyrophyllite and Peat	
Granite (including operations classified in manufactures)	Including operations classified in manufactures	Mineral industries only			Including operations classified in manufactures	Mineral industries only					
25	26	23	11	29	38	24	16	9	30	7	1
28	29	26	12	36	39	25	17	9	31	7	2
28	28	25	12	36	40	26	18	7	31	7	3
15	17	(NA)	5	8	37	(NA)	(NA)	7	1	5	4
9	26	26	12	31	19	19	14	5	26	6	5
3,828	14,441	13,616	6,049	2,723	22,054	20,799	20,021	1,282	397	650	6
[1]609	1,451	(NA)	805	175	[5]4,985	(NA)	(NA)	616	([5])	168	7
2,940	10,149	9,530	4,201	2,179	18,030	16,933	16,486	1,004	146	434	8
707	1,196	1,070	508	362	2,267	2,166	2,060	122	69	114	9
658	1,090	964	457	299	2,021	1,920	1,828	97	38	95	10
29	99	99	50	23	241	241	229	18	1	17	11
20	7	7	1	40	5	5	3	7	30	2	12
6	1	1	...	8	2	2	...	4	24	1	13
1,249	2,541	2,289	1,068	678	4,482	4,279	4,075	236	101	211	14
[1]751	905	(NA)	504	171	[5]4,738	(NA)	(NA)	469	([5])	175	15
	94	94	...	...	3	3	3	1	33	57	16
837	972	720	457	[7]355	1,076	873	802	79	18	16	17
77	132	132	114	(NA)	227	227	227	13	1	8	18
335	1,343	1,343	497	323	3,176	3,176	3,043	143	49	130	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
...	25	25	...	...	118	118	91	2	3	4	21
2,562	8,320	7,815	3,684	1,426	13,065	12,673	12,044	657	405	494	22
1,502	3,039	2,740	1,305	723	5,967	5,733	5,523	282	107	212	23
141	637	637	349	86	1,347	1,347	1,301	72	7	72	24
...	348	348	...	...	...	...	...	...	...	16	25
659		3,386	1,727	336		3,151	2,947	[9]273	[9]277	130	26
2		42	3	4		17	17	...	...	...	27
15		122	80	128		282	220	11	4	6	28
4	4,296	57	...	...	5,593	638	603	([9])	([9])	...	29
38		102	54	60		104	104	19	10	9	30
158		363	153	59		641	608	([9])	([9])	31	31
43		18	13	30		760	721	([9])	([9])	18	32
171		1,066	764	215		2,387	2,202	141	32	37	33
202		1,418	946	288		4,114	3,887	166	72	31	34
16		4	1	22		51	51	21	41	9	35
21		354	175	53		768	720	5	3	...	36
2		41	18	30		688	688	...	2	...	37
126		701	449	152		2,607	2,428	120	3	22	38
37		318	303	31		...	...	20	23	...	39
19		45	25	21		61	55	9	2	4	40
29		47	55	70		32	30	93	([11])	42	41
11	(NA)	22	14	18	(NA)	36	33	8	1	3	42
8		23	11	3		25	22	1	1	1	43
...		1	1	...		...	...	...	...	...	44
31		285	57	64		853	798	30	11	12	45
([12])		6	1	([12])		2	2	...	...	...	46
3		24	14	27		71	56	2	1	1	47
22		484	...	...		2,038	1,943	(D)	(D)	...	48
9		31	12	3		64	63	4	2	2	49
		1	1	...		( )	...	...	...	...	50
(D)		1,078	754	1,475		2,684	2,683	563	(D)	...	51
(D)		1.12	1.65	4.93		1.40	1.47	5.80	(D)	...	52

energy, contract work, and purchased machinery exceeds the amount received for services and capital expenditures. [7]Includes man-hours worked on floating equipment. [8]See table,1, footnote 9. [9]Cost of purchased gas, purchased electric energy, and contract work are included with cost of supplies. [10]See table 1, footnote 10. [11]Not shown since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers. [12]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Georgia, all mineral operations:									
Including operations in manufactures	220	49,066	37,326	4,782	504	10,490	13,016	2,726	[2]6,202
Mineral industries only	192	43,439	32,724	3,928	426	8,783	10,957	2,340	6,080
Metal mining	20	1,645	1,024	133	17	280	321	74	276
Bituminous coal	5	43	33	9	...	15	19	...	...
Crude petroleum and natural gas extraction[4]	10	[3]196	([5])	14	3	28	62	14	15
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	185	47,182	36,458	4,626	484	10,167	12,614	2,638	[2]5,911
Mineral industries only	157	41,555	31,856	3,772	406	8,460	10,555	2,252	5,789
Dimension stone:									
Including operations in manufactures	34	5,635	4,516	986	85	1,918	2,284	417	214
Mineral industries only	23	2,088	1,630	359	7	666	758	31	92
Crushed and broken stone:									
Including operations in manufactures	29	14,441	10,149	1,090	99	2,541	3,039	637	(NA)
Mineral industries only	26	13,616	9,530	964	99	2,289	2,740	637	1,100
Sand and gravel	36	2,723	2,179	299	23	678	723	86	257
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	39	22,054	18,030	2,021	241	4,482	5,967	1,347	(NA)
Mineral industries only	25	20,799	16,933	1,920	241	4,279	5,733	1,347	4,114
Other nonmetallic minerals (except fuels) mining	47	2,329	1,584	230	36	548	601	151	226
COUNTY									
Bartow (mineral industries only), total	15	3,872	2,328	226	22	606	707	101	262
Metal mining	7	695	335	33	6	70	89	31	24
Nonmetallic minerals (except fuels) mining	8	3,177	1,993	193	16	536	618	70	238
Bibb (mineral industries only)	4	155	102	10	...	25	27	...	5
De Kalb (including operations in manufactures)	8	4,274	3,035	377	37	831	1,026	271	585
Dougherty (sand and gravel only)	4	121	83	18	2	41	33	4	2
Elbert:									
Including operations in manufactures	18	2,055	1,569	303	18	566	689	83	64
Mineral industries only	14	1,313	1,040	183	4	342	389	18	42
Dimension stone:									
Classified in mineral industries	11	1,245	980	174	4	328	374	18	42
Included in manufactures	4	742	529	120	14	224	300	65	22
Fulton	6	357	311	43	...	105	153	...	(NA)
Murray	3	590	384	82	15	191	188	65	10
Muscogee	4	947	738	87	9	206	230	20	48
Oglethorpe (mineral industries only)	4	315	246	[6]62	([6])	113	[6]148	([6])	3
Pickens (including operations in manufactures)	11	(D)	(D)	485	73	(D)	(D)	(D)	(D)
Polk (mineral industries only)	5	450	364	58	3	111	117	18	94
Richmond (including operations in manufactures)	5	1,811	1,488	163	7	378	424	48	[2]34
Twiggs	5	8,179	7,455	660	98	1,476	2,096	576	1,614

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees		Man-hours worked by production and development workers (1,000)	Wages and salaries		New capital expenditures ($1,000)
				Production and development workers	All other employees		Production and development workers ($1,000)	All other employees ($1,000)	
COUNTY—Continued									
Walker	8	125	90	21	...	34	49	...	1
Bituminous coal	5	43	33	9	...	15	19	...	...
Washington	5	3,480	2,353	359	24	780	984	126	651
Wilkinson	7	8,285	6,605	753	106	1,698	2,303	591	1,609

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. [1]See table 1, footnote 6. [2]See table 1, footnote 9. [3]See table 2, footnote 4. [4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operation in the specified county. Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries. [5]See table 2, footnote 6. [6]Figures for "All other employees" are included with those for "Production and development workers."

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number industries represents number of establishments

	County	All mineral operations			Metal mining					
		Total	Classified in mineral industries	Included in manufactures	Iron ores	Lode gold	Bauxite	Manganese ores	Metal mining contract services	Beryllium ores
1	Georgia, total	220	192	28	11	1	5	1	1	1
2	Baldwin	1	1	...	...	...	...	...	...	...
3	Barrow	1	1	...	1	...	...	...	...	...
4	Bartow	16	15	1	4	...	3	...	...	...
5	Bibb	6	4	2	...	...	...	...	...	...
6	Brooks	1	1	...	...	...	...	...	...	...
7	Chatham	1	1	...	...	...	...	...	...	...
8	Cherokee	1	1	...	...	...	...	...	...	...
9	Cobb	2	2	...	...	...	...	...	...	...
10	Colquitt	1	1	...	...	...	...	...	...	...
11	Columbia	2	...	2	...	...	...	...	...	...
12	Coweta	1	1	...	...	...	...	...	...	...
13	Dade	2	2	...	...	...	...	...	...	...
14	Dawson	1	1	...	...	...	...	...	...	...
15	Decatur	3	3	...	...	...	...	...	...	...
16	De Kalb	8	4	4	...	...	...	...	...	...
17	Dougherty	4	4	...	...	...	...	...	...	...
18	Effingham	1	1	...	...	...	...	...	...	...
19	Elbert	18	14	4	...	...	...	...	...	...
20	Evans	1	1	...	...	...	...	...	...	...
21	Fanning	1	1	...	...	...	...	...	...	...
22	Fayette	1	1	...	...	...	...	...	...	...
23	Floyd	4	3	1	...	...	...	1	...	...
24	Franklin	1	1	...	...	...	...	...	...	...
25	Fulton	6	4	2	...	...	...	...	...	...
26	Gilmer	2	2	...	...	...	...	...	...	...
27	Glynn	2	2	...	...	...	...	...	...	...
28	Gordon	1	1	...	...	...	...	...	...	...
29	Grady	1	1	...	...	...	...	...	...	...
30	Greene	1	1	...	...	...	...	...	...	...
31	Gwinnett	2	2	...	...	1	...	...	...	...
32	Hancock	1	1	...	...	...	...	...	...	...
33	Hart	3	3	...	...	...	...	...	...	...
34	Henry	1	1	...	...	...	...	...	...	...
35	Houston	3	1	2	...	...	...	...	...	...
36	Jasper	1	1	...	...	...	...	...	...	...
37	Jones	1	1	...	...	...	...	...	...	...
38	Lamar	1	1	...	...	...	...	...	...	...
39	Liberty	1	1	...	...	...	...	...	...	...
40	Long	1	1	...	...	...	...	...	...	...
41	Lowndes	1	1	...	...	...	...	...	...	...
42	McIntosh	1	1	...	...	...	...	...	...	...
43	Macon	3	3	...	...	...	2	...	1	...
44	Madison	1	1	...	...	...	...	...	...	...
45	Mitchell	1	1	...	...	...	...	...	...	...
46	Monroe	5	5	...	...	...	...	...	...	...
47	Montgomery	1	1	...	...	...	...	...	...	...
48	Murray	3	3	...	...	...	...	...	...	...
49	Muscogee	4	4	...	...	...	...	...	...	...
50	Oconee	1	1	...	...	...	...	...	...	...
51	Oglethorpe	5	4	1	...	...	...	...	...	...
52	Pickens	11	9	2	...	...	...	...	...	...
53	Pike	2	2	...	...	...	...	...	...	...
54	Polk	7	5	2	4	...	...	...	...	...
55	Quitman	1	1	...	1	...	...	...	...	...
56	Rabun	2	2	...	...	...	...	...	...	...
57	Richmond	5	3	2	...	...	...	...	...	...
58	Rockdale	1	1	...	...	...	...	...	...	...
59	Screven	1	1	...	...	...	...	...	...	...
60	Spalding	1	1	...	...	...	...	...	...	...
61	Stephens	1	1	...	...	...	...	...	...	...
62	Talbot	1	1	...	...	...	...	...	...	...
63	Taylor	2	2	...	...	...	...	...	...	...
64	Telfair	1	1	...	...	...	...	...	...	...
65	Thomas	3	1	2	...	...	...	...	...	...
66	Troup	2	2	...	...	...	...	...	...	1
67	Twiggs	5	5	...	...	...	...	...	...	...
68	Upson	9	9	...	...	...	...	...	...	...
69	Walker	8	8	...	1	...	...	...	...	...
70	Ware	2	2	...	...	...	...	...	...	...
71	Warren	1	1	...	...	...	...	...	...	...
72	Washington	5	5	...	...	...	...	...	...	...
73	Whitfield	1	...	1	...	...	...	...	...	...
74	Wilkes	1	1	...	...	...	...	...	...	...
75	Wilkinson	7	7	...	...	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954

of establishments; for operations classified in the manufacturing including a mine or quarry)

Bituminous coal	Crude petroleum and natural gas extraction[1]		Nonmetallic minerals (except fuels) mining (Dimension stone)								
	Crude petroleum and Natural gas	Oil and gas field contract services	Limestone	Granite		Marble		Sandstone	Stone, n.e.c.		
				Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in manufactures	
5	7	3	1	19	9	1	1	1	1	1	1
...	...		...	...	...	...	...	...	...	...	2
...	...		...	...	...	...	...	...	...	...	3
...	...		...	...	...	...	...	...	...	...	4
...	...		...	...	...	...	...	...	...	...	5
...	...		...	...	...	...	...	...	...	...	6
...	...		...	...	...	...	...	...	...	...	7
...	...		...	...	...	...	...	...	...	...	8
...	...		...	...	...	...	...	...	...	...	9
...	...		...	...	...	...	...	...	...	...	10
...	...		...	...	...	...	...	...	...	...	11
...	...		...	...	...	...	...	...	...	...	12
...	...		...	...	...	...	...	...	...	...	13
...	...		...	...	...	...	...	...	...	...	14
...	...		...	...	...	...	...	...	...	...	15
...	...		...	2	4	...	...	...	...	...	16
...	...		...	...	...	...	...	...	...	...	17
...	...		...	...	...	...	...	...	...	...	18
...	...		...	11	4	...	...	...	...	...	19
...	...		...	...	...	...	...	...	...	...	20
...	...		...	...	...	...	...	...	...	...	21
...	...		...	...	...	...	...	...	...	...	22
...	...		...	...	...	...	...	...	...	...	23
...	...		...	...	...	...	...	...	...	...	24
...	...		...	...	...	...	...	...	...	...	25
...	...		...	...	...	...	...	...	...	...	26
...	1		...	...	...	...	...	...	...	...	27
...	...		...	...	...	1	...	...	...	...	28
...	...		...	...	...	...	...	...	...	...	29
...	...		...	...	...	...	...	...	...	...	30
...	...		...	...	...	...	...	...	...	...	31
...	...		...	...	...	...	...	...	...	...	32
...	...		...	...	...	...	...	...	...	...	33
...	...		...	...	...	...	...	...	...	...	34
...	...		...	...	...	...	...	...	...	...	35
...	...		...	...	...	...	...	...	...	...	36
...	...	(NA)	...	...	...	...	...	...	...	...	37
...	...		...	...	...	...	...	...	...	...	38
...	1		...	...	...	...	...	...	...	...	39
...	...		...	...	...	...	...	...	...	...	40
...	...		...	...	...	...	...	...	...	...	41
...	...		...	...	...	...	...	...	...	...	42
...	...		...	...	...	...	...	...	...	...	43
...	...		...	1	...	...	...	...	...	...	44
...	...		...	...	...	...	...	...	...	...	45
...	...		...	...	...	...	...	...	...	...	46
...	...		...	...	...	...	...	...	...	...	47
...	...		...	...	...	...	...	...	...	...	48
...	...		...	...	...	...	...	...	...	...	49
...	...		...	...	...	...	...	...	...	...	50
...	...		...	4	1	...	...	...	...	...	51
...	...		...	...	...	...	1	1	1	1	52
...	...		...	...	...	...	...	...	...	...	53
...	...		...	...	...	...	...	...	...	...	54
...	...		...	...	...	...	...	...	...	...	55
...	...		...	...	...	...	...	...	...	...	56
...	...		...	...	...	...	...	...	...	...	57
...	...		...	1	...	...	...	...	...	...	58
...	...		...	...	...	...	...	...	...	...	59
...	...		...	...	...	...	...	...	...	...	60
...	...		...	...	...	...	...	...	...	...	61
...	...		...	...	...	...	...	...	...	...	62
...	...		...	...	...	...	...	...	...	...	63
...	...		...	...	...	...	...	...	...	...	64
...	...		...	...	...	...	...	...	...	...	65
...	...		...	...	...	...	...	...	...	...	66
...	...		...	...	...	...	...	...	...	...	67
...	...		...	...	...	...	...	...	...	...	68
5	...		1	...	...	...	...	...	...	...	69
...	...		...	...	...	...	...	...	...	...	70
...	...		...	...	...	...	...	...	...	...	71
...	...		...	...	...	...	...	...	...	...	72
...	...		...	...	...	...	...	...	...	...	73
...	...		...	...	...	...	...	...	...	...	74
...	...		...	...	...	...	...	...	...	...	75

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number
industries represents number of establishments

	County	Nonmetallic minerals (except fuels) mining—Continued							
		Crushed and broken stone						Sand and gravel	
		Limestone		Granite	Slate	Marble	Sandstone	Common sand and gravel	Foundry sand
		Classified in mineral industries	Included in manufactures						
1	Georgia, total	9	3	12	1	3	1	35	1
2	Baldwin	...	...	...	...	...	...	...	...
3	Barrow	...	...	...	...	...	...	...	...
4	Bartow	1	1	...	1	...	...	...	...
5	Bibb	...	...	...	...	...	...	4	...
6	Brooks	...	...	...	...	...	...	1	...
7	Chatham	...	...	...	...	...	...	1	...
8	Cherokee	...	...	...	...	...	...	...	...
9	Cobb	...	...	1	...	...	...	1	...
10	Colquitt	...	...	...	...	...	...	1	...
11	Columbia	...	...	...	...	...	...	...	...
12	Coweta	...	...	...	...	...	...	1	...
13	Dade	1	...	...	...	...	...	1	...
14	Dawson	...	...	...	...	...	...	1	...
15	Decatur	...	...	...	...	...	...	...	...
16	De Kalb	...	...	2	...	...	...	...	...
17	Dougherty	...	...	...	...	...	...	4	...
18	Effingham	...	...	...	...	...	...	1	...
19	Elbert	...	...	1	...	...	...	1	...
20	Evans	...	...	...	...	...	...	1	...
21	Fanning	1	...	...	...	...	...	...	...
22	Fayette	...	...	1	...	...	...	...	...
23	Floyd	1	...	...	...	...	...	...	...
24	Franklin	...	...	...	...	...	...	...	...
25	Fulton	...	...	...	...	...	...	4	...
26	Gilmer	1	...	...	...	1	...	...	...
27	Glynn	...	...	...	...	...	...	1	...
28	Gordon	...	...	...	...	...	...	...	...
29	Grady	...	...	...	...	...	...	...	...
30	Greene	...	...	...	...	...	...	...	...
31	Gwinnett	...	...	...	...	...	...	...	...
32	Hancock	...	...	1	...	...	...	...	...
33	Hart	...	...	...	...	...	...	...	...
34	Henry	...	...	...	...	...	...	...	...
35	Houston	1	1	...	...	...	...	...	...
36	Jasper	...	...	...	...	...	...	...	...
37	Jones	...	...	1	...	...	...	...	...
38	Lamar	...	...	...	...	...	...	...	...
39	Liberty	...	...	...	...	...	...	...	...
40	Long	...	...	...	...	...	...	1	...
41	Lowndes	...	...	...	...	...	...	...	...
42	McIntosh	...	...	...	...	...	...	1	...
43	Macon	...	...	...	...	...	...	...	...
44	Madison	...	...	...	...	...	...	...	...
45	Mitchell	1	...	...	...	...	...	...	...
46	Monroe	...	...	...	...	...	...	...	...
47	Montgomery	...	...	...	...	...	...	1	...
48	Murray	...	...	...	...	...	...	...	...
49	Muscogee	...	...	2	...	...	...	2	...
50	Oconee	...	...	...	...	...	...	...	...
51	Oglethorpe	...	...	...	...	...	...	...	...
52	Pickens	...	...	...	...	2	...	...	...
53	Pike	...	...	...	...	...	...	...	...
54	Polk	...	1	...	...	...	...	...	...
55	Quitman	...	...	...	...	...	...	...	...
56	Rabun	...	...	1	...	...	...	1	...
57	Richmond	...	...	...	...	...	1	1	...
58	Rockdale	...	...	...	...	...	...	...	...
59	Screven	...	...	...	...	...	...	...	...
60	Spalding	...	...	...	...	...	...	...	...
61	Stephens	...	...	1	...	...	...	...	...
62	Talbot	...	...	...	...	...	...	1	...
63	Taylor	...	...	...	...	...	...	2	...
64	Telfair	...	...	...	...	...	...	1	...
65	Thomas	...	...	...	...	...	...	...	1
66	Troup	...	...	...	...	...	...	...	...
67	Twiggs	...	...	...	...	...	...	...	...
68	Upson	...	...	...	...	...	...	...	...
69	Walker	1	...	...	...	...	...	...	...
70	Ware	...	...	...	...	...	...	1	...
71	Warren	...	...	1	...	...	...	...	...
72	Washington	...	...	...	...	...	...	...	...
73	Whitfield	...	...	...	...	...	...	...	...
74	Wilkes	1	...	...	...	...	...	...	...
75	Wilkinson	...	...	...	...	...	...	...	...

NA Not available. [1]See table 3, footnote 4.

BY INDUSTRY AND COUNTY: 1954—Continued

of establishments; for operations classified in the manufacturing including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued													
Clay, ceramic, and refractory minerals						Natural abrasives, except sand, n.e.c.	Chemical and fertilizer mineral mining		Non-metallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels)			
Fire clay	Fuller's earth	Kaolin and ball clay	Feldspar	Clay, ceramic, and refractory minerals, n.e.c.			Barite	Chemical and fertilizer mineral mining, n.e.c.		Mica	Talc, soapstone, and pyrophyllite	Peat	
				Classified in mineral industries	Included in manufactures								
1	3	17	2	2	14	1	4	2	2	31	3	4	1
...	...	1	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	4	2	...	...	...	...	4
...	...	...	...	...	2	...	...	...	...	...	...	...	5
...	...	...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	...	1	...	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	...	...	...	...	...	...	10
...	...	...	...	...	2	...	...	...	...	...	...	...	11
...	...	...	...	...	...	...	...	...	...	...	...	...	12
...	...	...	...	...	...	...	...	...	...	...	...	...	13
...	...	...	...	...	...	...	...	...	...	...	...	...	14
...	1	...	...	...	...	...	...	...	2	...	...	...	15
...	...	...	...	...	...	...	...	...	...	...	...	...	16
...	...	...	...	...	...	...	...	...	...	...	...	...	17
...	...	...	...	...	...	...	...	...	...	...	...	...	18
...	...	...	...	...	...	...	...	...	...	1	...	...	19
...	...	...	...	...	...	...	...	...	...	...	...	...	20
...	...	...	...	...	...	...	...	...	...	...	...	...	21
...	...	...	...	...	...	...	...	...	...	...	...	...	22
...	...	...	...	1	1	...	...	...	...	...	...	...	23
...	...	...	...	...	...	...	...	...	...	1	...	...	24
...	...	...	...	...	2	...	...	...	...	...	...	...	25
...	...	...	...	...	...	...	...	...	...	...	...	...	26
...	...	...	...	...	...	...	...	...	...	...	...	...	27
...	...	...	...	...	...	...	...	...	...	...	...	...	28
...	1	...	...	...	...	...	...	...	...	...	...	...	29
...	...	...	1	...	...	...	...	...	...	...	...	...	30
...	...	...	...	...	...	1	...	...	...	...	...	...	31
...	...	...	...	...	...	...	...	...	...	...	...	...	32
...	...	...	...	...	...	...	...	...	...	3	...	...	33
...	...	...	...	...	...	...	...	...	...	1	...	...	34
...	...	...	...	...	1	...	...	...	...	...	...	...	35
...	...	...	1	...	...	...	...	...	...	...	...	...	36
...	...	...	...	...	...	...	...	...	...	...	...	...	37
...	...	...	...	...	...	...	...	...	...	1	...	...	38
...	...	...	...	...	...	...	...	...	...	...	...	...	39
...	...	...	...	...	...	...	...	...	...	...	...	...	40
...	...	...	...	...	...	...	...	...	...	...	...	1	41
...	...	...	...	...	...	...	...	...	...	...	...	...	42
...	...	...	...	...	...	...	...	...	...	...	...	...	43
...	...	...	...	...	...	...	...	...	...	...	...	...	44
...	...	...	...	...	...	...	...	...	...	...	...	...	45
...	...	...	...	...	...	...	...	...	...	5	...	...	46
...	...	...	...	...	...	...	...	...	...	...	...	...	47
...	...	...	...	...	...	...	...	...	...	...	3	...	48
...	...	...	...	...	...	...	...	...	...	...	...	...	49
...	...	...	...	...	...	...	...	...	...	1	...	...	50
...	...	...	...	...	...	...	...	...	...	...	...	...	51
...	...	...	...	...	...	...	...	...	...	5	...	...	52
...	...	...	...	...	...	...	...	...	...	1	...	1	53
...	...	...	...	1	1	...	...	...	...	...	...	...	54
...	...	...	...	...	...	...	...	...	...	...	...	...	55
...	...	...	...	...	...	...	...	...	...	...	...	...	56
...	...	1	...	...	2	...	...	...	...	...	...	...	57
...	...	...	...	...	...	...	...	...	...	...	...	...	58
...	...	...	...	...	...	...	...	...	...	...	...	1	59
...	...	...	...	...	...	...	...	...	...	1	...	...	60
...	...	...	...	...	...	...	...	...	...	...	...	...	61
...	...	...	...	...	...	...	...	...	...	...	...	...	62
...	...	...	...	...	...	...	...	...	...	...	...	...	63
...	...	...	...	...	...	...	...	...	...	...	...	...	64
...	...	...	...	...	2	...	...	...	...	...	...	...	65
...	...	...	...	...	...	...	...	...	...	1	...	...	66
...	1	4	...	...	...	...	...	...	...	...	...	...	67
...	...	...	...	...	...	...	...	...	...	9	...	...	68
...	...	...	...	...	...	...	...	...	...	...	...	...	69
...	...	...	...	...	...	...	...	...	...	...	...	1	70
...	...	...	...	...	...	...	...	...	...	...	...	...	71
...	...	5	...	...	...	...	...	...	...	...	...	...	72
...	...	...	...	...	1	...	...	...	...	...	...	...	73
...	...	...	...	...	...	...	...	...	...	...	...	...	74
1	...	6	...	...	...	...	...	...	...	...	...	...	75

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Georgia, all mineral operations:												
Including operations classified in manufactures	220	46	59	29	28	34	13	7	4	...	...	...
Mineral industries only	192	46	52	22	25	27	11	6	3	...	...	...
Metal mining, total	20	7	4	1	5	3	...	...	...	...	...	...
Iron ores	11	5	1	...	3	2	...	...	...	...	...	...
Lode gold	1	1	...	...	...	...	...	...	...	...	...	...
Bauxite	5	1	3	...	1	...	...	...	...	...	...	...
Manganese ores	1	...	...	...	1	...	...	...	...	...	...	...
Metal mining contract services	1	...	...	1	...	...	...	...	...	...	...	...
Beryllium ores	1	...	...	...	...	1	...	...	...	...	...	...
Bituminous coal	5	...	5	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	10	8	1	...	1	...	...	...	...	...	...	...
Crude petroleum and Natural gas	7	6	1	...	...	...	...	...	...	...	...	...
Drilling oil and gas wells contract services	3	2	...	...	1	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	185	31	49	28	22	31	13	7	4	...	...	...
Mineral industries only	157	31	42	21	19	24	11	6	3	...	...	...
Dimension stone:												
Limestone	1	...	1	...	...	...	...	...	...	...	...	...
Granite:												
Classified in mineral industries	19	...	4	6	3	4	2	...	...	...	...	...
Included in manufactures	9	...	...	2	1	4	1	1	...	...	...	...
Marble:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	1	...	...	...
Sandstone	1	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	1	...	...	1	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	9	...	1	1	3	3	1	...	...	...	...	...
Included in manufactures	3	...	1	...	...	1	1	...	...	...	...	...
Granite	12	1	...	2	3	2	1	3	...	...	...	...
Slate	1	...	...	...	...	...	1	...	...	...	...	...
Marble	3	...	1	...	...	...	1	1	...	...	...	...
Sandstone	1	...	...	...	...	...	1	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	35	4	16	8	3	4	...	...	...	...	...	...
Foundry sand	1	...	...	...	...	...	1	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay	1	...	1	...	...	...	...	...	...	...	...	...
Fuller's earth	3	1	...	...	...	2	...	...	...	...	...	...
Kaolin and ball clay	17	...	4	1	...	4	3	2	3	...	...	...
Feldspar	2	1	...	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	2	...	...	...	2	...	...	...	...	...	...	...
Included in manufactures	14	...	6	4	2	2	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	1	1	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Barite	4	...	1	...	1	2	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	2	...	1	...	1	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	2	...	1	...	1	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Mica	31	22	7	1	1	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	3	...	...	...	...	3	...	...	...	...	...	...
Peat	4	1	2	1	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Georgia, total	3,928	32,724	5,861	1.49	179	5,696	551	580	7,817	(2)	42	43	15
Metal mining	133	1,024	364	2.74	355	351	...	15	597	...	80	...	20
Bituminous coal	9	33	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction	14	(3)	...	...	...	...	xxx	xxx	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	3,772	31,856	5,497	1.46	173	5,345	551	565	7,220	(2)	40	46	14
Dimension stone	359	1,630	(D)	(D)	(D)	(D)	...	...	(D)	...	68	...	32
Crushed and broken stone:													
Granite	457	4,201	744	1.63	177	744	10	58	817	...	85	...	15
Other stones	507	5,329	43	0.08	8	43	281	286	362	28	35	37	...
Sand and gravel	299	2,179	1,316	4.40	604	1,262	159	...	1,554	...	65	8	[4]27
Clay, ceramic, and refractory minerals:													
Kaolin and ball clay	1,828	16,486	2,582	1.41	157	2,527	101	112	3,274	...	7	93	...
Other clays	92	447	1	0.01	2	...	...	...	1	100	...	...	...
Natural abrasives, Chemical and fertilizer mineral mining and Nonmetallic minerals (except fuels) mining contract services	97	1,004	563	5.80	561	521	...	2	793	...	46	2	52
Miscellaneous nonmetallic minerals (except fuels):													
Mica	38	146	(D)	(D)	(D)	(D)	...	107	(D)	...	100	...	...
Talc, soapstone, and pyrophyllite and Peat	95	434	...	...	...	...	...	...	..	...	...	...	...

D Withheld to avoid approximately disclosing figures for individual companies.
xxx Not applicable.
[1]For computation of water intake per production worker, including mine water used, see table 2.
[2]Less than 0.5 percent.
[3]See table 2, footnote 6.
[4]Represents "not specified."

IDAHO

111-1



MINING IN IDAHO: 1954

Rank among States:
Employment, 28
Value of shipments, 29

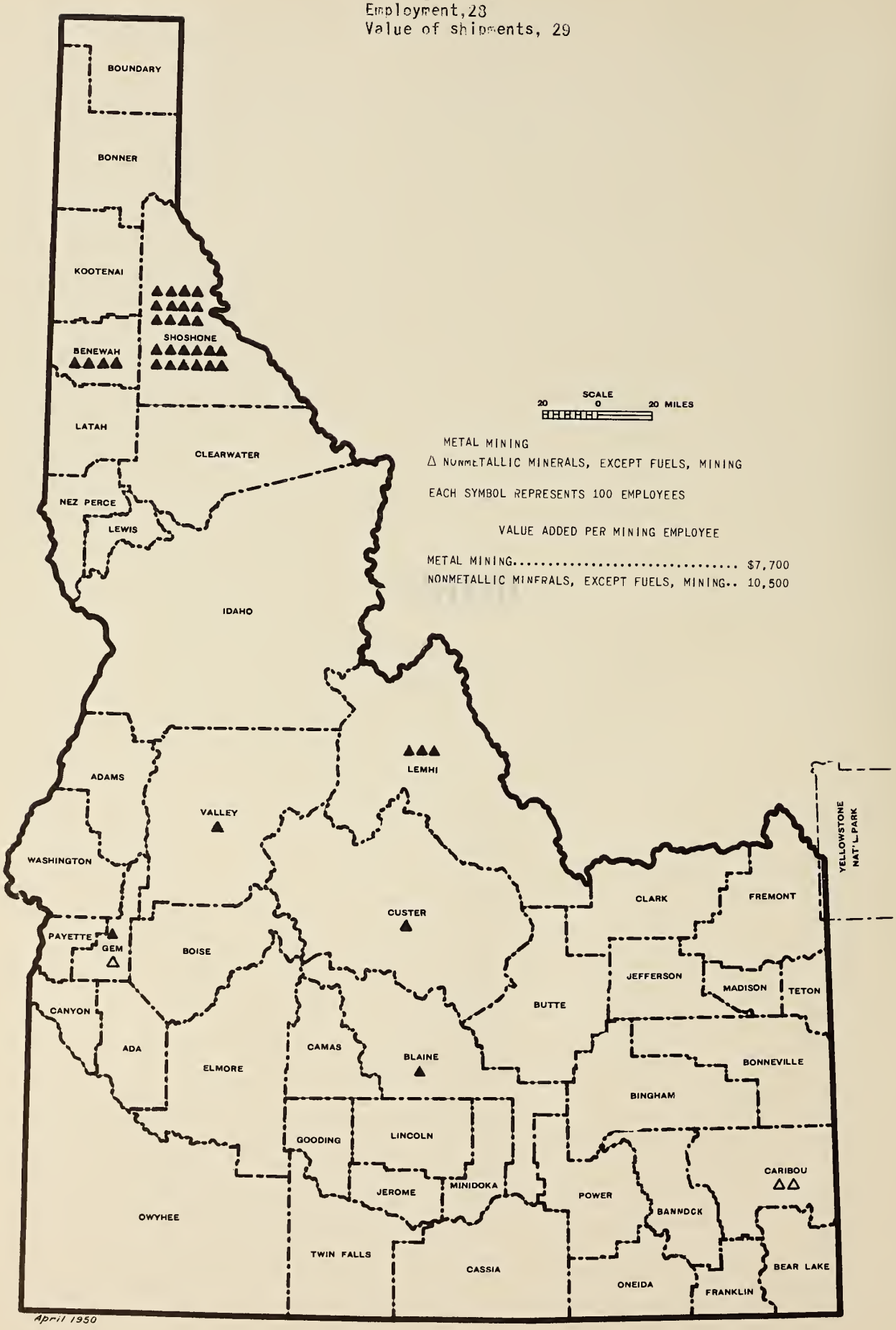


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes common clay and shale and contract service operations)

Item	1954	1939	1929	1919[1]	1909[1]	1902[1]
Number of operating companies	223	108	(NA)	(NA)	[2]890	[2]615
Number of establishments	257	(NA)	153	132	890	(NA)
Number of mines and quarries	250	111	166	133	2,431	617
Number of oil and gas wells producing at end of year	...	...	(NA)	...	...	...
Number of preparation plants	150	49	(NA)	(NA)	(NA)	(NA)
Value of shipments[3]...$1,000	[4]52,083	23,389	20,746	11,840	8,649	8,215
Value added in mining...do	[4]38,692	18,952	15,593	8,654	5,533	5,982
Number of persons engaged, total	4,935	5,108	5,136	3,214	5,470	4,949
Production and development workers	4,135	4,654	4,777	2,828	4,324	[5]4,415
All other employees	646	395	[6]337	295	275	534
Proprietors and firm members	154	59	[7]22	91	871	(NA)
Performing manual labor	111	41	(NA)	34	297	(NA)
Man-hours worked by production and development workers...1,000	8,651	9,753	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	38,362	12,583	14,208	8,571	9,005	7,775
Wages of production and development workers...do	18,711	7,086	8,254	4,735	5,348	4,801
Salaries of all other employees...do	3,694	1,060	[6]801	650	541	741
Minerals received for preparation...do	2,672	(NA)	(NA)	...	...	(NA)
Supplies...do	[8]9,212	3,275	[9]3,836	2,398	2,383	2,031
Purchased fuel...do	[8]906	246	[9]167	206	413	
Purchased electric energy...do	[8]1,380	814	[9]844	366		
Contract work...do	[8]1,787	102	306	216	320	202
Purchased machinery installed...do	[10]3,256		1,014	(NA)		
Capital expenditures, total...do	[10]5,822	(NA)	(NA)	(NA)		
Development and exploration of mineral property...do	[10]2,236		2,799	1,630	(NA)	(NA)
Preparation plant construction...do	[10]600	143				
Other construction...do	[10]162		(NA)	(NA)		
New machinery and equipment...do	[10]2,435	639				
Used plant and equipment...do	[10]389	132				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	[10]222	83	73	35	31	[7]19
Per production worker	54	18	15	12	7	4
Prime movers...1,000	[10]113	22	10	5	21	[7]19
Electric motors driven by purchased energy...do	[10]109	61	63	30	10	([11])
Horsepower rating of electric motors driven by energy generated at establishment...do	[10]5	6	1	1	1	[7]2
Energy used...million kwh equivalent	[10]527	[12]233	[7]300	(NA)		
Coal...1,000 short tons	[10]13	[12]8	[7]22	17		
Fuel oils...1,000 barrels	[10]94	[12]27	[7]6	1	(NA)	(NA)
Gas...million cu.ft	...	...	...	...		
Electric energy purchased...million kwh	[10]192	[12]116	[7]120	(NA)		
Electric energy generated and used...do	[10]8	[12]9	[7]9	(NA)		

NA Not available.

[1]Excludes data for sand and gravel operations, and for 1919 and 1909, any stone quarries operated as part of cement or lime establishments. Only one sand and gravel operation was reported for 1929, and no such stone quarries.

[2]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[3]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production (or net shipments for copper, lead, zinc, gold, and silver ores) and exclude this duplication.

[4]Excludes figures for the Uranium-radium-vanadium ores industry. No data on value of shipments and cost of ores received for milling were obtained for this industry for 1954

[5]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[6]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[7]Excludes data for nonproducing operations.

[8]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[9]Data for cost of purchased fuel and electric energy used by nonproducing operations are included with those for supplies.

[10]Excludes statistics for crushed stone and clay operations classified in manufactures.

[11]Less than one-half of the unit of measure specified.

[12]Excludes data for contract service operations.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Idaho, total		Metal mining			
		Including operations classified in manufactures	Mineral industries only	Total	Copper, lead, zinc, gold, and silver ores		
					Total[2]	Lead and zinc ores	
						Valued chiefly for lead	Valued chiefly for zinc
1	Number of operating companies	223	215	147	122	50	12
2	Number of establishments	257	249	169	141	64	13
	Number of mines, quarries, and producing oil and gas wells:						
3	1954	250	242	162	136	61	12
4	1939	111	(NA)	103	101	17	9
5	Number of preparation plants	150	145	80	64	23	10
	Value of shipments[3]						
6	1954 ..... $1,000	[4]52,083	[4]51,883	[4]42,936	36,221	19,976	4,792
7	1939 ..... do	23,389	(NA)	22,770	[5]22,400	9,293	3,427
8	Value added in mining ..... do	[4]38,692	[4]38,513	[4]32,446	27,368	15,008	3,154
9	Number of persons engaged, total	4,935	4,917	4,283	3,742	1,993	573
10	Production and development workers	4,135	4,121	3,607	3,163	1,668	532
11	All other employees	646	646	583	496	287	35
12	Proprietors and firm members	154	150	93	83	38	6
13	Performing manual labor	111	107	77	69	29	6
	Man-hours worked by production and development workers:						
14	1954 1,000	8,651	8,622	7,556	6,549	3,468	1,075
15	1939 ..... do	9,753	(NA)	9,482	[5]9,272	4,731	819
	At mines:						
16	Underground ..... do	5,403	5,402	5,270	4,806	2,569	765
17	Open-pit ..... do	[4]476	[4]451	[4]125	[4]33	...	...
18	Surface (mine shops, yards, etc.) ..... do	1,589	1,586	1,463	1,157	603	218
19	At preparation plants ..... do	1,183	1,183	698	553	296	92
20	Man-hours spent on development and exploration work (included above) ..... do	673	673	658	543	275	120
21	Principal expenses designated below, total $1,000	38,362	38,294	32,736	27,867	15,218	4,375
22	Wages of production and development workers ..... do	18,711	18,664	16,460	14,420	7,413	2,344
23	Salaries of all other employees ..... do	3,694	3,694	3,371	2,898	1,677	212
24	Minerals received for preparation ..... do	2,672	2,672	2,672	2,174	...	...
25	Supplies ..... do	[8]9,212	9,191	7,775	6,500	5,088	1,501
	Purchased fuel:						
26	Coal ..... do	[8]116	116	60	57	27	19
27	Fuel oil ..... do	[8]493	493	227	101	34	3
28	Gas ..... do	...	...	...	...	...	...
29	Other fuels ..... do	[8]297	297	108	76	36	9
30	Purchased electric energy ..... do	[8]1,380	1,380	1,261	1,038	579	213
31	Contract work ..... do	[8]1,787	1,787	802	603	364	74
32	Purchased machinery installed ..... do	[9]3,256	3,254	1,315	791	301	82
33	Capital expenditures, total ..... do	[9]5,822	5,820	3,730	2,487	1,461	263
34	Development and exploration of mineral property ..... do	[9]2,236	2,236	2,180	1,809	1,217	209
35	Preparation plant construction ..... do	[9]600	600	372	108	43	...
36	Other construction ..... do	[9]162	162	109	24	4	...
37	New machinery and equipment ..... do	[9]2,435	2,433	759	345	124	42
38	Used plant and equipment ..... do	[9]389	389	310	201	73	12
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[9]223	223	151	117	61	26
40	Per production worker	54	54	42	37	36	49
41	Prime movers 1,000	[9]113	113	51	32	12	5
42	Electric motors driven by purchased energy ..... do	[9]110	110	100	85	49	21
43	Horsepower rating of electric motors driven by energy generated at establishment ..... do	[9]5	5	5	4	2	...
44	Energy used ..... million kwh equivalent	527	527	324	259	136	47
45	Coal ..... 1,000 short tons	[9]13	13	6	6	3	2
46	Fuel oil ..... 1,000 barrels	[9]94	94	40	18	7	([11])
47	Gas ..... million cu.ft	...	...	...	...	...	...
48	Electric energy purchased ..... million kwh	192	192	181	162	91	30
49	Electric energy generated and used ..... do	8	8	8	7	5	...
50	Water intake, including mine water used ..... million gallons	[9]6,814	6,814	5,782	5,466	2,064	380
51	Per production worker ..... do	1.65	1.65	1.60	1.73	1.24	0.71

NA Not available.

[1]For industries included, see table 4.

[2]Total includes, but detail excludes, data for copper ores.

[3]See table 1, footnote 3.

[4]See table 1, footnote 4.

[5]Data for one copper ores mine are included with those for Ferro-alloy and other metal ores. The total man-hours for Copper, lead, zinc, gold, and silver ores includes data for such nonproducing operations. These are not available separately by type of ore.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Metal mining—Continued				Crude petroleum and natural gas extraction and Nonmetallic minerals (except fuels) mining							
Copper, lead, zinc, gold, and silver ores—Continued			Ferro-alloy and other metal ores[1]	Total		Stone (including operations classified in manufactures)	Sand and gravel	Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Chemical and fertilizer minerals mining (Barite and phosphate rock)	Crude petroleum, Natural abrasives, and Other nonmetallic minerals[1]	
Gold and silver ores				Including operations classified in manufactures	Mineral industries only						
Lode gold	Placer gold	Silver ores									
22	14	19	24	78	70	12	44	7	5	12	1
22	15	19	28	88	80	13	50	7	6	12	2
21	15	19	26	88	80	13	50	7	6	12	3
38	27	9	2	8	(NA)	4	1	1	1	1	4
9	15	7	16	70	65	10	40	2	6	12	5
105	235	11,089	[4]6,715	9,147	8,947	[3]1,438	2,559	[3]60	3,945	1,145	6
1,853	1,597	6,230	[5]370	619	(NA)	30	(NA)	(NA)	(NA)	[6]84	7
195	175	8,816	[4]5,078	6,246	6,067	844	1,868	55	2,485	994	8
56	37	1,070	541	652	634	114	237	6	219	76	9
39	22	897	444	528	514	93	178	6	188	63	10
6	2	163	87	63	63	9	17	...	31	6	11
11	13	10	10	61	57	12	42	...	...	7	12
10	12	7	8	34	30	5	24	...	...	5	13
81	54	1,864	1,007	1,095	1,066	193	378	10	374	140	14
1,232	527	1,794	[5]210	271	(NA)	15	(NA)	(NA)	(NA)	[6]78	15
69	...	1,397	464	133	132	1	...	...	102	30	16
...	[7]27	6	92	351	326	95	[7]139	10	90	17	17
7	10	318	306	126	123	22	(NA)	...	38	66	18
5	17	143	145	485	485	75	239	...	144	27	19
48	...	94	115	15	15	...	1	...	13	1	20
294	176	7,732	4,869	5,626	5,558	1,010	1,463	19	2,444	690	21
} 180	92	{ 4,416	2,040	2,251	2,204	405	755	15	775	301	22
		961	473	323	323	30	85	...	177	31	23
4	...	5	498	...	...	...	(NA)	...	...	...	24
61	47	1,950	1,275	[8]1,437	1,416	[8]283	353	[8]2	605	194	25
...	...	11	3	[8]56	56	...	...	...	56	...	26
6	24	33	126	[8]266	266	[8]39	80	...	110	37	27
...	...	...	...	...	...	...	...	...	...	...	28
6	10	14	32	[8]189	189	[8]36	119	[8]1	11	22	29
7	...	239	223	[8]119	119	[8]9	19	[8]1	86	4	30
30	3	103	199	[8]985	985	[8]208	52	...	624	101	31
22	33	350	524	[9]1,941	1,939	[9]105	444	[9]1	1,252	139	32
226	57	432	1,243	[9]2,092	2,090	[9]86	376	...	1,284	346	33
198	26	111	371	[9]56	56	...	2	...	27	27	34
...	...	65	264	[9]228	228	[9]21	1	...	...	206	35
1	...	19	85	[9]53	53	[9]1	12	...	40	...	36
27	11	141	414	[9]1,676	1,674	[9]62	291	...	1,217	106	37
...	20	96	109	[9]79	79	[9]2	70	...	...	7	38
4	4	21	34	[9]72	72	[9]7	46	[9]1	10	8	39
118	([10])	24	77	134	138	[9]70	257	100	53	125	40
3	3	7	19	[9]62	62	[9]6	43	[9]1	5	7	41
1	1	14	15	[9]10	10	[9]1	3	...	5	1	42
1	1	1	1	([11])	([11])	...	([11])	...	...	...	43
3	8	65	65	[9]203	203	[9]21	55	([11])	113	14	44
...	...	1	([11])	[9]7	7	...	...	...	7	...	45
1	3	7	22	[9]54	54	[9]7	15	...	27	5	46
...	...	...	...	...	...	...	...	...	...	...	47
([11])	...	41	19	[9]11	11	([11])	1	...	10	83	48
...	1	1	1	...	...	...	...	...	...	...	49
12	858	2,152	316	[9]1,032	1,032	[9]6	675	[9]1	279	71	50
0.31	([10])	2.40	0.71	1.95	2.01	0.06	3.79	1.00	1.48	1.13	51

[6]Represents contract service operations only.
[7]Includes man-hours worked on floating equipment.
[8]See table 1, footnote 8.
[9]See table 1, footnote 10.
[10]Not computed since the number of proprietors and firm members exceeds one-third the number of production and development workers.
[11]See table 1, footnote 11.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Idaho, all mineral operations:									
Including operations in manufactures	257	[1]52,083	[1]38,692	4,135	646	8,651	18,711	3,694	5,433
Mineral industries only	249	[1]51,883	[1]38,513	4,121	646	8,622	18,664	3,694	5,431
Metal mining, total	169	[1]42,936	[1]32,446	3,607	583	7,556	16,460	3,371	3,420
Copper ores	8	24	20	5	3	7	14	9	48
Lead and zinc ores	77	24,768	18,162	2,200	322	4,543	9,757	1,889	1,639
Gold and silver ores	56	11,429	9,186	958	171	1,999	4,649	1,000	599
Ferro-alloy ores, Metal mining contract services, and Miscellaneous metal ores	28	[1]6,715	[1]5,078	444	87	1,007	2,040	473	1,134
Crude petroleum and natural gas extraction and Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	88	9,147	6,246	528	63	1,095	2,251	323	2,013
Mineral industries only	80	8,947	6,067	514	63	1,066	2,204	323	2,011
Stone (including operations in manufactures)	13	1,438	844	93	9	193	405	30	84
Sand and gravel	50	2,559	1,868	178	17	378	755	85	306
Clay, ceramic, and refractory minerals (including operations in manufactures)	7	60	55	6	...	10	15	...	...
Chemical and fertilizer mineral mining	6	3,945	2,485	188	31	374	775	177	1,284
Natural abrasives, Crude petroleum, Nonmetallic minerals (except fuels) contract services, and Miscellaneous nonmetallic minerals	12	1,145	994	63	6	140	301	31	339
COUNTY									
Bannock (including operations in manufactures)	5	241	199	21	(NA)	40	80	(NA)	(NA)
Bonner	13	184	170	36	5	81	159	13	105
Booneville (mineral industries only)	7	300	276	[2]29	([2])	59	[2]128	([2])	67
Canyon	6	182	108	14	1	35	46	3	9
Caribou	5	2,762	1,270	148	19	297	653	108	1,259
Custer	23	516	488	47	10	111	201	46	188
Lead and zinc ores	12	454	438	26	7	60	117	34	135
Elmore	6	83	136	21	1	45	93	3	117
Gem	4	267	256	17	5	37	80	18	39
Gooding (Sand and gravel)	5	138	117	10	...	21	25	...	...
Idaho	17	429	345	35	4	77	162	28	69
Gold and silver ores	13	181	155	18	3	37	62	25	69
Crushed and broken stone and Sand and gravel	4	248	190	17	1	40	100	3	...
Latah (mineral industries only)	6	862	682	72	...	137	303	...	120
Shoshone	55	30,602	23,015	2,474	443	5,094	11,422	2,638	1,358
Lead and zinc ores	42	19,568	14,307	1,600	229	3,287	7,124	1,408	1,201
Gold and silver ores	7	10,968	8,673	871	82	1,803	4,291	516	139
Twin Falls (Sand and gravel)	3	206	142	13	1	26	55	2	4

NA Not available.
[1]See table 1, footnote 4.
[2]Data for "all other employees" are included with those for "production and development workers".

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Idaho, total	Ada	Adams	Bannock	Bear Lake	Benewah	Bingham	Blaine	Boise	Bonner	Boone-ville	Bound-ary	Butte
All operations, total	257	7	1	5	3	2	3	8	8	13	8	6	2
Classified in mineral industries.	249	6	1	4	2	2	3	8	8	13	6	6	2
Included in manufactures	8	1	...	1	1	...	...	...	...	...	2	...	...
Metal mining:													
Copper ores	8	...	...	...	...	...	...	...	...	...	...	...	1
Lead and zinc ores:													
Lead ores	19	...	1	...	...	...	...	2	...	1	...	2	...
Lead-zinc ores:													
Primarily lead	45	...	...	...	...	...	...	2	...	3	...	1	...
Primarily zinc	12	...	...	...	...	1	...	...	...	...	...	...	...
Zinc ores	1	...	...	...	...	...	...	...	...	...	...	...	...
Gold and silver ores:													
Gold:													
Lode	22	1	...	...	...	...	...	1	5	...	...	...	...
Placer	15	1	...	...	...	...	...	...	...	...	2	...	...
Silver ores	19	...	...	...	...	...	...	...	1	6	...	...	...
Ferro-alloy ores, except vanadium:													
Manganese ores	2	...	...	1	...	...	...	...	...	...	...	...	1
Tungsten ores	12	...	...	...	...	...	...	1	...	...	...	...	...
Columbium ores	1	...	...	...	...	...	...	...	...	...	...	...	...
Cobalt ores	1	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	2	...	...	...	...	...	...	...	...	...	...	1	...
Miscellaneous metal ores:													
Mercury ores	2	...	...	...	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	2	...	...	...	...	...	...	...	...	...	...	...	...
Antimony ores	2	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores	4	1	...	...	...	...	...	...	1	...	...	...	...
Crude petroleum and natural gas	1	...	...	...	...	...	...	...	...	1	...	...	...
Nonmetallic minerals (except fuels) mining:													
Dimension sandstone:													
Classified in mineral industries.	1	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	1	...	...	...	...	...	1	...	...
Crushed and broken stone:													
Limestone:													
Classified in mineral industries	1	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...	...
Trap rock	5	...	...	...	...	...	...	...	...	...	...	2	...
Sandstone	1	...	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c	2	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	50	3	...	1	1	...	2	...	1	1	3	...	...
Clay, ceramic, and refractory minerals:													
Fire clay:													
Classified in mineral industries	1	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:													
Classified in mineral industries	1	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	4	1	...	...	...	...	...	...	...	...	1	...	...
Natural abrasives, except sand, n.e.c	2	...	...	...	....	1	...	...	...	1	...	...	...
Chemical and fertilizer mineral mining:													
Barite	1	...	...	...	...	...	...	1	...	...	...	...	...
Phosphate rock	5	...	...	...	1	...	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	2	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):													
Gypsum	1	...	...	...	...	...	...	...	...	...	...	...	...
Mica	2	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	3	...	...	...	...	...	...	1	...	...	1	...	...
Peat	1	...	...	1	...	...	...	...	...	...	...	...	...

Table 4.--NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Camas	Canyon	Caribou	Cassia	Custer	Elmore	Franklin	Fremont	Gem	Gooding	Idaho	Jefferson	Jerome	Kootenai
All operations, total	2	6	5	3	23	6	1	1	4	5	17	1	1	8
Classified in mineral industries	2	6	5	2	23	6	1	1	4	5	17	1	1	8
Included in manufactures	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Metal mining:														
Copper ores	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Lead and zinc ores:														
Lead ores	1	...	...	...	4	...	...	...	...	...	...	...	...	1
Lead-zinc ores:														
Primarily lead	...	...	...	...	7	...	...	...	...	...	...	...	...	2
Primarily zinc	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Zinc ores	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Gold and silver ores:														
Gold:														
Lode	...	...	...	...	2	4	...	...	1	...	5	...	...	...
Placer	1	...	...	...	1	...	...	...	...	...	8	...	1	...
Silver ores	...	...	...	...	2	...	...	...	...	...	...	...	...	1
Ferro-alloy ores, except vanadium:														
Manganese ores	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tungsten ores	...	...	...	...	4	...	...	...	...	...	...	...	...	...
Columbium ores	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cobolt ores	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:														
Mercury ores	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Antimony ores	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Miscellaneous metal ores	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:														
Dimension sandstone:														
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:														
Limestone:														
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trap rock	...	...	...	...	...	...	...	...	...	...	2	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	...	6	...	1	...	1	1	1	3	5	2	1	...	3
Clay, ceramic, and refractory minerals:														
Fire clay:														
Classified in mineral industries	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c:														
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:														
Barite	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phosphate rock	...	...	3	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):														
Gypsum	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mica	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Peat	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Latah	Lemhi	Lewis	Lincoln	Minidoka	Nez Perce	Oneida	Owyhee	Payette	Power	Shoshone	Twin Falls	Valley	Washington
All operations, total	7	15	2	1	2	2	1	6	2	1	55	3	10	1
Classified in mineral industries	6	15	2	1	2	2	1	6	1	1	55	3	10	1
Included in manufactures	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Metal mining:														
Copper ores	...	3	...	...	...	...	...	...	...	...	2	...	...	...
Lead and zinc ores:														
Lead ores	...	4	...	...	...	...	...	...	...	...	3	...	...	...
Lead-zinc ores:														
Primarily lead	...	2	...	...	...	...	...	...	...	...	28	...	...	...
Primarily zinc	...	...	...	...	...	...	...	...	...	...	11	...	...	...
Zinc ores	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gold and silver ores:														
Gold:														
Lode	...	1	...	...	...	...	...	...	...	...	2	...	...	...
Placer	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Silver ores	...	...	...	...	...	...	...	3	...	...	5	...	1	...
Ferro-alloy ores, except vanadium:														
Manganese ores	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tungsten ores	...	1	...	...	...	...	...	...	...	...	3	...	3	...
Columbium ores	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Cobalt ores	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:														
Mercury ores	...	...	...	...	...	...	...	1	...	...	...	...	1	...
Uranium-radium-vanadium ores	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Antimony ores	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Miscellaneous metal ores	...	...	...	...	...	...	...	...	...	...	...	...	2	...
Crude petroleum and natural gas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:														
Dimension sandstone:														
Classified in mineral industries	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:														
Limestone:														
Classified in mineral industries	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trap rock	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	1	...	1	...	...	...	...	...	...
Sand and gravel	1	2	1	1	2	1	1	...	...	1	1	3	...	...
Clay, ceramic, and refractory minerals:														
Fire clay:														
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c:														
Classified in mineral industries	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Natural abrasives, except sand, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:														
Barite	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phosphate rock	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):														
Gypsum	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Mica	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Idaho, all mineral operations:												
Including operations classified in manufactures	257	74	101	34	20	13	7	3	3	2	...	...
Mineral industries only	249	73	95	33	20	13	7	3	3	2	...	...
Metal mining, total	169	54	63	18	13	7	6	3	3	2	...	...
Copper ores	8	5	3	...	...	...	...	...	...	...	...	...
Lead and zinc ores:												
Lead-zinc ores	77	18	32	6	9	3	5	1	2	1	...	...
Gold and silver ores:												
Lode gold	22	8	10	3	1	...	...	...	...	...	...	...
Placer gold	15	8	5	2	...	...	...	...	...	...	...	...
Silver ores	19	9	5	1	1	...	...	2	...	1	...	...
Ferro-alloy ores, except vanadium:												
Manganese ores	2	...	...	2	...	...	...	...	...	...	...	...
Tungsten ores	12	4	4	2	1	...	1	...	...	...	...	...
Columbium ores	1	...	...	...	...	1	...	...	...	...	...	...
Metal mining contract services	2	...	2	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:												
Mercury ores	2	1	...	...	...	1	...	...	...	...	...	...
Uranium-radium-vanadium ores	2	...	1	...	...	1	...	...	...	...	...	...
Antimony ores	2	...	1	...	1	...	...	...	...	...	...	...
Cobalt ores	1	...	...	...	...	...	...	...	1	...	...	...
Miscellaneous metal ores	4	1	...	2	...	1	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	1	...	1	...	...	...	...	...	...	...	...	...
Crude petroleum	1	...	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	87	20	37	16	7	6	1	...	...	...	...	...
Mineral industries only	79	19	31	15	7	6	1	...	...	...	...	...
Dimension sandstone:												
Classified in mineral industries	1	...	...	...	1	...	...	...	...	...	...	...
Included in manufactures	2	1	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	1	...	...	...	1	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Trap rock	5	2	1	...	1	1	...	...	...	...	...	...
Sandstone	1	...	...	1	...	...	...	...	...	...	...	...
Stone, n.e.c	2	1	1	...	...	...	...	...	...	...	...	...
Sand and gravel	50	11	24	12	2	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	4	...	4	...	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c	2	1	...	1	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Barite	1	...	1	...	...	...	...	...	...	...	...	...
Phosphate rock	5	...	1	...	...	3	1	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	2	...	...	...	1	1	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum	1	1	...	...	...	...	...	...	...	...	...	...
Mica	2	1	...	1	...	...	...	...	...	...	...	...
Pumice and pumicite	3	2	...	...	1	...	...	...	...	...	...	...
Peat	1	...	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Idaho, total	4,121	[5]38,513	5,584	1.36	145	5,312	1,230	4,501	7,019	([2])	85	12	3
Metal mining, total	3,607	[5]32,446	4,603	1.28	142	4,382	1,179	4,450	5,922	([2])	95	3	2
Copper ores	5	20	...	...	...	...	...	...	...	...	...	...	...
Lead and zinc ores:													
Valued chiefly for lead	1,668	15,002	1,744	1.05	116	1,607	320	2,741	2,174	([2])	93	3	4
Valued chiefly for zinc	532	3,154	377	0.71	120	374	3	1,539	380	...	80	18	[3]2
Gold and silver ores:													
Lode gold	39	195	12	0.31	62	12	...	3	12	...	100	...	...
Placer gold	22	175	2	([4])	11	xxx	856	xxx	858	...	100	...	...
Silver ores	897	8,816	2,152	2.40	244	2,079	...	167	2,152	...	99	1	...
Ferro-alloy and other metal ores	444	[5]5,078	316	0.71	62	310	...	...	346	...	100	...	...
Crude petroleum and natural gas extraction and Nonmetallic minerals (except fuels) mining, total	514	6,067	981	1.91	162	930	51	51	1,097	2	38	52	[3]8
Stone and Clay, ceramic, and refractory minerals	85	720	6	0.07	8	6	1	1	7	...	...	...	...
Sand and gravel	178	1,868	675	3.79	361	624	...	...	740	...	13	76	[3]11
Chemical and fertilizer mineral mining (Barite and Phosphate rock)	188	2,485	279	1.49	114	279	...	...	279	...	100	...	...
Other industries	63	994	21	0.33	21	21	50	50	71	100	...	...	...

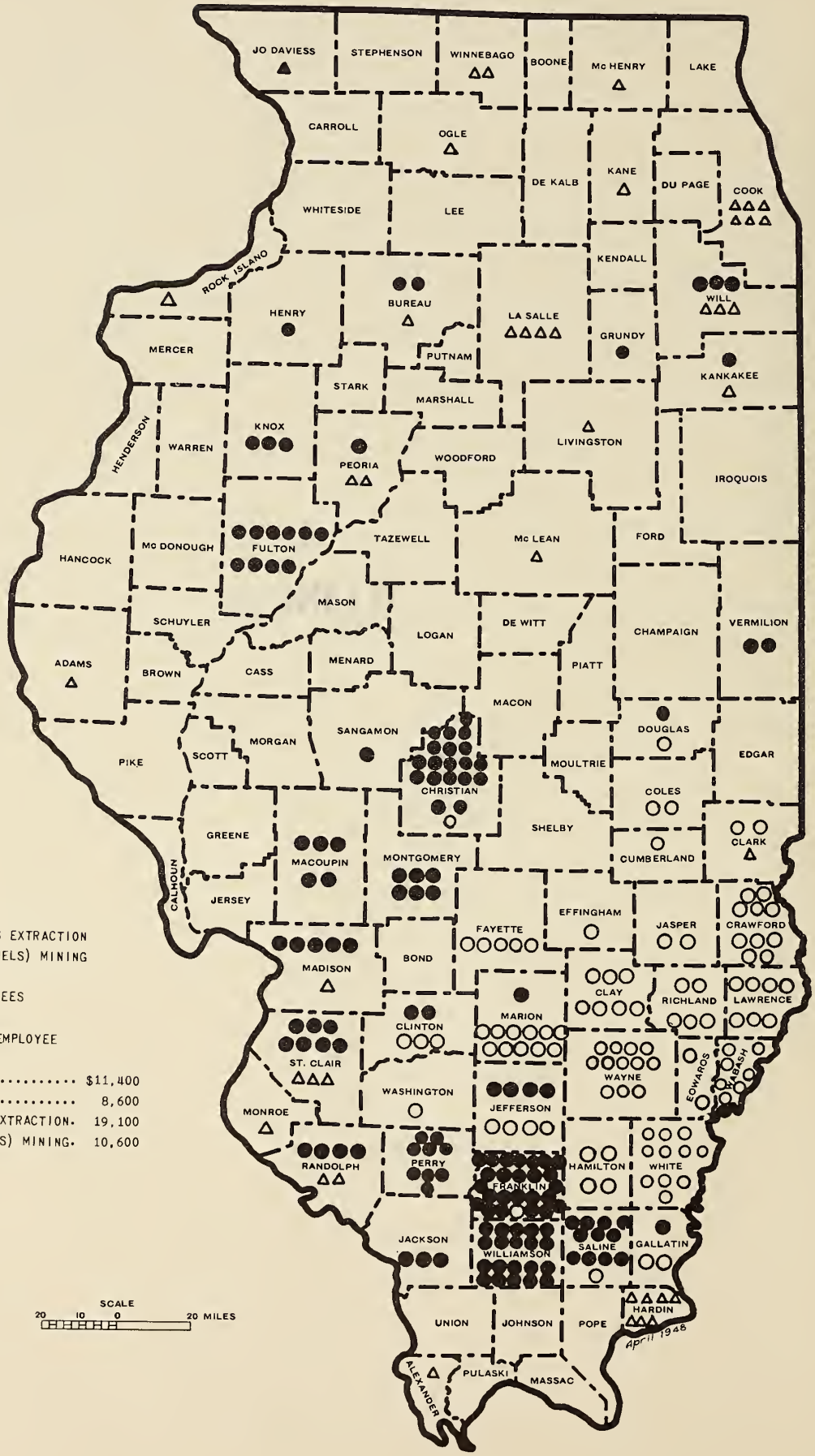
xxx Not applicable.
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]Less than 0.5 percent.
[3]Represents "not specified."
[4]See table 2, footnote 10.
[5]See table 1, footnote 4.

ILLINOIS

112-1

MINING IN ILLINOIS: 1954

Rank among States:
Employment, 8
Value of shipments, 7



▲ METAL MINING
● COAL MINING
C CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$11,400
COAL MINING	8,600
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	19,100
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	10,600

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries and common clay and shale operations		
	1954	1939[1]	1919[2]	1909[2]	1902[3]	1954	1939[4]	1929
Number of operating companies	1,266	1,166	(NA)	[5]924	[5]1,010	484	[5]715	(NA)
Number of establishments	1,384	(NA)	772	995	(NA)	576	(NA)	536
Number of mines and quarries	609	788	590	771	1,083	609	747	565
Number of oil and gas wells producing at end of year	25,814	16,981	16,498	10,918	30	xxx	xxx	xxx
Number of preparation plants	397	287	(NA)	(NA)	(NA)	387	281	(NA)
Value of shipments[6]....$1,000	496,815	211,654	178,673	76,659	37,465	257,659	90,096	132,948
Value added in mining....do	378,595	165,538	153,649	64,291	34,106	186,891	70,510	112,497
Number of persons engaged, total	31,976	49,892	84,309	76,098	41,859	20,920	37,888	56,429
Production and development workers	26,964	44,422	79,123	72,131	[7]40,040	18,248	34,401	53,415
All other employees	3,530	4,465	4,495	2,531	1,819	2,136	2,858	[8]2,711
Proprietors and firm members	1,482	1,005	691	1,436	(NA)	536	629	303
Performing manual labor	624	508	126	401	(NA)	316	438	(NA)
Man-hours worked by production and development workers....1,000	49,370	68,509	(NA)	(NA)	(NA)	32,560	50,491	(NA)
Principal expenses designated below, total....$1,000	271,707	111,534	129,327	61,892	31,937	159,812	66,215	101,011
Wages of production and development workers....do	108,516	54,325	94,179	46,410	26,726	75,077	39,202	73,818
Salaries of all other employees....do	19,673	11,093	10,124	3,114	1,852	12,620	7,427	[8]6,742
Minerals received for preparation....do	21,221	(NA)	92	102	(NA)	18,638	(NA)	(NA)
Supplies....do	64,137	17,588	18,716	8,495	3,333	37,267	13,882	14,307
Purchased fuel....do	6,470	2,338	4,810	1,328		3,216	1,798	2,461
Purchased electric energy....do	9,962	3,784	974			7,590	3,618	3,410
Contract work....do	41,728	22,406	432	2,443	26	5,404	288	273
Purchased machinery installed....do	38,327		(NA)			15,571		8,240
Capital expenditures, total....do	63,625	(NA)	(NA)			16,918	(NA)	(NA)
Development and exploration of mineral property....do	20,734		4,331	(NA)	(NA)	535		2,876
Preparation plant construction....do	4,886	2,545				4,647	1,570	
Other construction....do	6,645					2,247		(NA)
New machinery and equipment....do	27,400	18,085	(NA)			7,370	2,882	
Used plant and equipment....do	3,960	744				2,119	421	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	1,429	839	318	226	96	928	638	440
Per production worker	53	19	4	3	2	51	19	8
Prime movers....1,000	834	497	262	223	96	415	303	184
Electric motors driven by purchased energy....do	595	342	56	3	([9])	513	335	256
Horsepower rating of electric motors driven by energy generated at establishment....do	43	95	97	15	5	31	88	78
Energy used....million kwh equivalent	7,909	8,716	(NA)			2,910	6,994	9,163
Coal....1,000 short tons	199	866	2,093			198	855	1,162
Fuel oils....1,000 barrels	515	127	8	(NA)	(NA)	301	45	17
Gas....million cu.ft	12,871	4,641	1,810			184	25	...
Electric energy purchased....million kwh	671	239	(NA)			516	229	184
Electric energy generated and used....do	66	97	(NA)			34	93	42

xxx Not applicable.
NA Not available.

[1]Excludes data for dimension stone dressing operations, if any, in conjunction with one dimension limestone quarry.

[2]Excludes data for sand, gravel, common clay, and shale operations, and limestone quarries operated as part of cement and lime plants. There were 137 such mines and quarries in 1939 with products valued at $5,822,000. For 1919, excludes data for one nonproducing establishment.

[3]Excludes data for sand, gravel, common clay, and shale operations and limestone quarries operated as part of cement plants. Includes data for lime plants producing lime valued at $486,000.

[4]Excludes data for 4 nonproducing bituminous coal mines and one nonproducing fluorspar mine. See also footnote 1.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Illinois, total		Metal mining			Bituminous coal	Crude petroleum and natural gas extraction		
		Including operations classified in manufactures[1]	Mineral industries only	Total	Lead and zinc ores	Metal mining contract services		Total	Crude petroleum and natural gas	Natural gas liquids
1	Number of operating companies	1,266	1,233	10	7	3	156	749	522	5
2	Number of establishments	1,384	1,345	13	10	3	198	769	523	8
	Number of mines, quarries, and producing oil and gas wells:									
3	1954	26,423	26,384	8	8	xxx	193	25,814	24,896	xxx
4	1939	17,769	(NA)	...	...	xxx	550	16,981	(NA)	xxx
5	Number of preparation plants	397	397	2	2	xxx	69	8	xxx	8
	Value of shipments:[2]									
6	1954.....$1,000	496,815	492,465	3,111	3,082	29	179,920	237,180	182,138	12,914
7	1939.....do	211,654	(NA)	...	...	...	76,864	121,177	96,618	288
8	Value added in mining.....do	378,595	375,191	1,266	1,239	27	129,161	[5]190,222	150,753	([5])
9	Number of persons engaged, total	31,976	31,639	122	113	9	15,152	10,901	7,057	277
10	Production and development workers	26,964	26,627	89	84	5	13,491	8,567	5,250	244
11	All other employees	3,530	3,530	22	22	...	1,465	1,394	1,178	33
12	Proprietors and firm members	1,482	1,482	11	7	4	196	940	629	...
13	Performing manual labor	624	624	11	7	4	125	308	181	...
	Man-hours worked by production and development workers:									
14	1954.....1,000	49,370	48,697	181	176	5	21,988	16,512	10,117	502
15	1939.....do	68,509	(NA)	...	...	...	[6]43,730	17,702	[6]10,416	116
	At mines:									
16	Underground.....do	13,407	13,407	95	90	5	12,703	xxx	xxx	xxx
17	Open-pit.....do	6,534	5,861	...	...	...	2,553	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.).....do	7,683	7,683	23	23	...	6,732	xxx	xxx	xxx
19	At preparation plants.....do	5,736	5,736	63	63	...		502	xxx	502
20	At oil and gas field operations.....do	16,010	16,010	xxx	xxx	xxx	xxx	16,010	10,117	xxx
21	Man-hour spent on development and exploration work (included above).....do	9,409	9,409	6	6	...	183	6,041	1,804	...
22	Principal expenses designated below, total.....$1,000	271,707	269,419	2,371	2,361	10	116,475	[5]110,849	80,872	[5]5,070
23	Wages of production and development workers.....do	108,516	107,174	356	348	8	55,958	32,892	20,828	1,143
24	Salaries of all other employees.....do	19,673	19,673	147	147	...	8,764	7,053	6,002	167
25	Minerals received for preparation.....do	21,221	21,221	1,390	1,390	...	19,831	[5]29,028	xxx	[5]3,447
26	Supplies.....do	64,137	63,191	315	315	...	22,808		15,771	
	Purchased fuel:									
27	Coal.....do	536	536	...	...	([10])	...	1	1	...
28	Fuel oils.....do	2,275	2,275	13	13	...	495	834	327	...
29	Gas-natural and manufactured.....do	201	201	...	...	...	...	131	74	(D)
30	Other fuels.....do	3,458	3,458	3	1	2	252	2,263	1,148	(D)
31	Purchased electric energy.....do	9,962	9,962	140	140	...	5,722	2,364	2,232	313
32	Contract work.....do	41,728	41,728	7	7	...	2,645	36,283	34,489	
33	Purchased machinery installed.....do	38,327	38,327	4	4	...	10,664	22,747	19,327	30
34	Capital expenditures, total.....do	63,625	63,625	27	27	...	11,658	46,693	41,984	243
35	Development and exploration of mineral property.....do	20,734	20,734	27	27	...	374	20,194	19,734	...
36	Preparation plant construction.....do	4,886	4,886	...	...	...	3,708	239	xxx	239
37	Other construction.....do	6,645	6,645	...	...	...	1,626	4,398	4,278	...
38	New machinery and equipment.....do	27,400	27,400	...	...	...	4,791	20,021	16,899	4
39	Used plant and equipment.....do	3,960	3,960	...	...	...	1,159	1,841	1,073	...
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	1,429	1,429	8	8	([10])	579	500	330	25
41	Per production worker	53	54	90	95	47	43	58	63	102
42	Prime movers.....1,000	834	834	4	4	([10])	171	418	252	23
43	Electric motors driven by purchased energy.....do	595	595	4	4	...	408	82	78	2
44	Horsepower rating of electric motors driven by energy generated at establishment.....do	43	43	...	...	...	5	12	10	2
45	Energy used.....million kwh equivalent	7,909	7,909	13	12	1	1,433	4,982	2,049	2,384
	Produced and used for fuel:									
46	Coal.....1,000 short tons	106	106	xxx	xxx	xxx	106	xxx	xxx	xxx
47	Crude petroleum.....1,000 barrels	32	32	xxx	xxx	xxx	xxx	32	32	xxx
48	Natural gas.....million cu.ft	11,529	11,529	xxx	xxx	xxx	xxx	11,529	3,830	[11]7,699
	Purchased fuels:									
49	Coal.....1,000 short tons	93	93	...	...	([10])	...	([10])	([10])	...
50	Fuel oils.....1,000 barrels	483	483	2	2	...	93	178	87	...
51	Gas (natural and manufactured).....million cu.ft	1,342	1,342	...	...	...	...	1,158	765	(D)
52	Electric energy purchased.....million kwh	671	671	8	8	...	397	155	145	9
53	Electric energy generated and used.....do	66	66	...	...	([10])	4	32	24	7
54	Water intake, including mine water used.....million gallons	27,805	27,805	795	795	...	4,786	7,974	7,499	354
55	Per production worker.....do	1.03	1.04	8.93	9.46	...	0.35	0.93	1.43	1.45

xxx Not applicable. D Withheld to avoid approximately disclosing figures of individual companies. NA Not available. [1]Includes one stone quarry operated as part of a wholesale trade establishment. [2]See table 1, footnote 6. [3]Figures for Building, repairing, and dismantling rigs and derricks contractors are included with those for Oil and gas field contract services, n.e.c., establishments. [4]Figures for one dimension limestone quarry are included with totals for Crushed and broken stone. [5]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the

AND INDUSTRY 1954 AND SELECTED COMPARATIVE STATISTICS 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction—Con.		Nonmetallic minerals (except fuels) mining											
		Total		Dimension stone	Crushed and broken stone		Sand and gravel		Clay, ceramic, and refractory minerals		Fluorspar	Natural abrasives, Chemical and fertilizer mineral mining, n.e.c., Contract services, and Miscellaneous nonmetallic minerals	
Oil and gas field contract services		Including operations classified in manufactures[1]	Mineral industries only		All stone (including operations classified in manufactures)[1]	Limestone	Common sand and gravel	Foundry sand	Fire clay (including operations classified in manufactures)	Clay, ceramic, and refractory minerals, n.e.c. (including operations classified in manufactures)			
Drilling oil and gas wells	Oil and gas field contract services, n.e.c.												
135	101	352	319	8	130	121	143	10	6	35	22	8	1
137	101	404	365	8	143	134	163	13	6	39	24	8	2
915	3	408	369	8	143	134	169	12	6	39	26	5	3
(NA)	(NA)	238	(NA)	1	73	71	73	19	10	36	19	7	4
xxx	xxx	318	318	...	136	133	135	12	2	2	28	3	5
33,653	8,475	76,604	72,254	138	38,305	35,728	25,806	686	471	1,976	8,110	1,112	6
20,072	[3]4,199	13,613	(NA)	([4])	[4]5,120	4,901	4,248	546	309	380	1,493	1,517	7
23,777	6,325	57,946	54,542	110	29,428	27,396	19,975	437	305	1,482	5,426	783	8
2,446	1,121	5,801	5,464	28	2,722	2,514	1,970	86	40	155	710	91	9
2,133	940	4,817	4,480	14	2,375	2,171	1,552	63	37	149	545	82	10
128	55	649	649	...	213	209	277	15	1	...	137	6	11
185	126	335	335	14	134	134	141	8	2	6	28	3	12
72	55	180	180	7	68	68	83	7	...	...	15	...	13
4,033	1,860	10,689	10,016	25	5,388	4,977	3,566	129	77	298	1,035	171	14
5,320	[3]1,850	7,077	(NA)	([4])	[4]2,948	2,696	1,767	220	176	317	[6]1,012	637	15
xxx	xxx	609	609	...	199	199	8	...	...	...	400	2	16
xxx	xxx	3,981	3,308	25	2,335	1,978	[7]1,127	[7]60	68	283	50	33	17
xxx	xxx	928	928	...	765	765	(NA)	(NA)	6	3	89	65	18
xxx	xxx	5,171	5,171	...	2,089	2,035	2,431	69	3	12	496	71	19
4,033	1,860	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
3,801	436	3,179	3,179	3	26	26	3,132	...	...	...	10	8	21
19,244	5,663	42,012	39,724	68	19,204	17,784	14,954	569	301	1,046	5,221	649	22
7,744	3,177	19,310	17,968	39	9,517	8,669	6,850	222	127	547	1,719	289	23
651	233	3,709	3,709	...	1,307	1,270	1,557	80	1	...	733	31	24
xxx	xxx	...	...	...	...	...	(NA)	(NA)	...	...	...	...	25
8,102	1,708	[8]11,986	11,040	15	[8]5,607	5,135	3,583	68			1,936	202	26
...	...	[8]535	535	...	[8]55	52	337	...			127	16	27
497	10	[8]933	933	5	[8]450	449	310	47	173	499	76	38	28
40	11	[8]70	70	...	[8]11	11	47	...			...	...	29
739	368	[8]940	940	6	[8]478	477	401	22			14	4	30
22	3	[8]1,736	1,736	...	[8]745	708	630	31			293	29	31
1,449	153	[8]2,793	2,793	3	[8]1,034	1,013	1,239	99			323	40	32
2,791	599	[9]4,912	4,912	6	[9]2,575	2,563	1,919	79			302	7	33
3,764	702	[9]5,247	5,247	7	[9]2,078	2,076	2,635	97			387	7	34
460	...	[9]139	139	1	[9]23	23	53	...			50	...	35
xxx	xxx	[9]939	939	...	[9]324	323	572	27			16	...	36
113	7	[9]621	621	...	[9]380	380	166	2			62	...	37
2,528	590	[9]2,588	2,588	...	[9]1,133	1,132	1,139	60			236	7	38
663	105	[9]960	960	6	[9]218	218	705	8			23	...	39
102	43	[9]342	342	2	[9]168	166	132	9			26	3	40
48	46	71	76	143	71	76	85	143			48	37	41
101	42	[9]241	241	2	[9]123	123	91	6	(NA)	(NA)	15	2	42
1	1	[9]101	101	([10])	[9]45	43	41	3			11	1	43
...	...	[9]26	26	...	[9]8	8	9	...			9	...	44
431	118	[9]1,481	1,481	3	[9]407	384	756	26			224	40	45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx			xxx	xxx	46
...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx			xxx	xxx	47
...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx			xxx	xxx	48
...	...	[9]93	93	...	[9]9	6	58	...			22	3	49
89	2	[9]210	210	1	[9]96	96	74	11			16	8	50
303	75	[9]184	184	...	[9]42	42	142	...			...	...	51
1	([10])	[9]111	111	...	[9]42	42	40	2			18	2	52
1	...	[9]30	30	...	[9]2	2	14	...			14	...	53
119	2	[9]14,250	14,250	...	[9]680	614	12,915	5			650	...	54
0.06	([10])	2.96	3.18	...	0.29	0.28	8.32	0.08			1.19	...	55

figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown for these industries. [6]Data for 4 nonproducing bituminous coal mines and one nonproducing fluorspar mine are included with those for the Crude petroleum and natural gas industries. [7]Includes man-hours worked on floating equipment. [8]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies. [9]Excludes statistics for crushed stone and clay operations classified in manufactures. [10]Less than one-half of the unit of measure specified. [11]Represents residue gas used for power or heat.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Illinois, all mineral operations:									
Including operations in manufactures	1,384	496,815	378,595	26,964	3,530	49,370	108,516	19,673	[2]59,665
Mineral industries only:									
Including crude petroleum and natural gas extraction	1,345	492,465	375,191	26,627	3,530	48,697	107,174	19,673	59,665
Excluding crude petroleum and natural gas extraction	576	255,285	184,969	18,060	2,136	32,185	74,282	12,620	14,813
Metal mining, total	13	3,111	1,266	89	22	181	356	147	27
Lead and zinc ores	10	3,082	1,239	84	22	176	348	147	27
Metal mining contract services	3	29	27	5	...	5	8	...	...
Bituminous coal	198	179,920	129,161	13,491	1,465	21,988	55,958	8,764	10,499
Crude petroleum and natural gas extraction, total	769	237,180	[3]190,222	8,567	1,394	16,512	32,892	7,053	44,852
Crude petroleum and natural gas[4]	523	182,138	150,753	5,250	1,178	10,117	20,828	6,002	40,911
Natural gas liquids	8	12,914	([3])	244	33	502	1,143	167	243
Oil and gas field contract services[5]	[5]238	42,128	30,102	3,073	183	5,893	10,921	884	3,698
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	404	76,604	57,946	4,817	649	10,689	19,310	3,709	[2]4,287
Mineral industries only	365	72,254	54,542	4,480	649	10,016	17,968	3,709	4,287
Dimension stone	8	138	110	14	...	25	39	...	1
Crushed and broken stone (including operations in manufactures)	143	38,305	29,428	2,375	213	5,388	9,517	1,307	[2]1,860
Sand and gravel	176	26,492	20,412	1,615	292	3,695	7,072	1,637	2,019
Clay, ceramic, and refractory minerals (including operations in manufactures)	45	2,447	1,787	186	1	375	674	1	[2]36
Natural abrasives, except sand, Chemical and fertilizer mineral mining, Nonmetallic minerals (except fuels) contract services, and Peat	32	9,222	6,209	627	143	1,206	2,008	764	371
COUNTY									
Adams (mineral industries only)	7	821	642	76	14	195	284	58	80
Alexander	4	693	525	47	8	106	142	35	...
Bond	13	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)
Boone	4	143	122	10	...	21	33	...	...
Carroll	4	121	70	11	1	17	27	3	13
Champaign	4	139	134	15	1	31	66	3	114
Christian	22	(NA)	(NA)	[6]1,934	([6])	(NA)	(NA)	(NA)	(NA)
Clark, total	26	(NA)	(NA)	[6]162	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	20	(NA)	(NA)	[6]101	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal and Nonmetallic minerals (except fuels) mining	6	493	416	56	5	110	138	7	6
Clay	89	(NA)	(NA)	[6]426	([6])	(NA)	(NA)	(NA)	(NA)
Clinton, total	54	(NA)	(NA)	[6]339	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	51	(NA)	(NA)	[6]162	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal and Crushed and broken stone	3	544	475	[6]177	([6])	214	[6]331	([6])	...
Coles	36	(NA)	(NA)	[6]158	([6])	(NA)	(NA)	(NA)	(NA)
Cook (including operations in manufactures), total	20	(NA)	(NA)	623	772	(NA)	(NA)	5,020	(NA)
Crude petroleum and natural gas[7]	3	(NA)	(NA)	8	290	(NA)	(NA)	1,666	(NA)
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	17	16,573	12,697	615	[8]482	1,531	3,129	[8]3,354	(NA)
Mineral industries only	12	15,953	12,133	593	[8]482	1,488	3,041	[8]3,354	572
Crawford	56	(NA)	(NA)	[6]608	([6])	(NA)	(NA)	(NA)	(NA)
Cumberland	10	(NA)	(NA)	[6]64	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	7	(NA)	(NA)	[6]63	([6])	(NA)	(NA)	(NA)	(NA)
Douglas	3	(NA)	(NA)	[6]118	([6])	(NA)	(NA)	(NA)	(NA)
Edwards (mineral industries only)	66	(NA)	(NA)	[6]136	([6])	(NA)	(NA)	(NA)	(NA)
Effingham	33	(NA)	(NA)	[6]44	([6])	(NA)	(NA)	(NA)	(NA)
Fayette	47	(NA)	(NA)	[6]348	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas extraction[7]	44	(NA)	(NA)	[6]329	([6])	(NA)	(NA)	(NA)	(NA)
Franklin	42	(NA)	(NA)	[6]2,579	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	35	(NA)	(NA)	[6]87	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Fulton (Bituminous coal only)	24	23,937	16,816	855	170	1,764	4,571	831	1,467
Gallatin	66	(NA)	(NA)	[6]202	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	5	339	231	74	2	103	156	6	7
Greene	6	262	184	[6]34	([6])	67	[6]80	([6])	20
Grundy (including operations in manufactures)	6	(NA)	(NA)	[6]54	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	3	1,351	1,048	60	11	122	379	56	26
Hamilton	73	(NA)	(NA)	[6]258	([6])	(NA)	(NA)	(NA)	(NA)
Hancock	6	(NA)	(NA)	[6]51	([6])	(NA)	(NA)	(NA)	(NA)
Hardin	27	(NA)	(NA)	[6]584	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	24	8,339	5,622	579	130	1,103	1,824	694	375
Chemical and fertilizer mineral mining (Flouorspar)	17	7,756	5,198	512	130	977	1,613	694	361
Henderson	4	122	86	16	...	32	39	...	15
Henry	7	(D)	(D)	85	5	(D)	(D)	(D)	(D)
Jackson	8	(D)	(D)	316	5	(D)	(D)	(D)	(D)
Jasper	35	(NA)	(NA)	[6]148	([6])	(NA)	(NA)	(NA)	(NA)
Jefferson	57	(NA)	(NA)	[6]669	([6])	(NA)	(NA)	(NA)	(NA)
Jo Daviess	14	3,134	1,266	85	22	178	347	147	3
Kane	8	948	726	56	7	116	291	46	93
Kankakee (including operations in manufactures)	7	4,023	3,329	222	32	564	1,196	213	188
Knox (Bituminous coal only)	5	5,144	4,186	278	21	547	1,565	109	167
Lake (mineral industries only)	7	262	200	16	2	33	66	6	30
La Salle (including operations in manufactures)	37	(NA)	(NA)	[6]373	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining: Including operations in manufactures	33	8,930	6,874	479	68	1,049	2,073	416	(NA)
Mineral industries only	25	5,625	3,993	284	68	659	1,251	416	680
Sand and gravel	19	5,285	3,736	262	65	609	1,152	405	657
Lawrence	59	(NA)	(NA)	[6]438	([6])	(NA)	(NA)	(NA)	(NA)
Lee (mineral industries only), total	7	506	413	41	6	77	116	8	95
Crushed and broken stone	4	267	203	15	2	32	49	3	30
Sand and gravel	3	239	210	26	4	45	67	5	65
Livingston (mineral industries only)	10	1,277	1,070	83	8	193	321	88	132
Logan	3	759	626	51	22	110	210	114	12
McDonough (mineral industries only)	9	(NA)	(NA)	[6]34	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	6	348	190	27	3	69	93	6	66
McHenry	9	1,676	1,294	109	12	242	497	72	69
Macon, total	10	(NA)	(NA)	[6]35	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas	7	(NA)	(NA)	[6]18	([5])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	3	196	153	12	5	23	40	16	3
Macoupin (Bituminous coal only)	4	2,477	2,124	492	33	563	1,443	159	30
Madison (mineral industries only), total	31	(NA)	(NA)	[6]695	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	20	(NA)	(NA)	[6]29	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	4	3,729	2,571	518	16	746	1,721	115	23
Nonmetallic minerals (except fuels) mining	7	887	764	112	20	253	396	124	180
Marion	55	(NA)	(NA)	[6]767	([6])	(NA)	(NA)	(NA)	(NA)
Marshall (mineral industries only)	3	(NA)	(NA)	[6]22	([6])	(NA)	(NA)	(NA)	(NA)
Menard	7	326	246	[6]38	([6])	64	[6]129	([6])	25
Monroe	3	(NA)	(NA)	[6]98	([6])	(NA)	(NA)	(NA)	(NA)
Montgomery	4	(NA)	(NA)	[6]572	([6])	(NA)	(NA)	(NA)	(NA)
Ogle, total	12	957	633	72	4	158	279	37	133
Crushed and broken stone	6	452	289	38	4	78	127	37	32
Sand and gravel	6	505	344	34	...	80	152	...	101
Peoria, total	26	3,740	2,730	242	50	498	945	215	621
Bituminous coal	14	1,853	1,514	121	20	219	428	92	39
Nonmetallic minerals (except fuels) mining	12	1,887	1,476	121	30	279	517	123	228
Sand and gravel	7	1,146	930	74	22	166	327	91	117
Perry	13	(NA)	(NA)	[6]864	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	10	13,194	9,513	793	70	1,394	3,436	382	1,090

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Pike	6	227	148	27	3	60	81	4	...
Pope	7	339	216	33	3	58	106	12	3
Randolph	11	[9]7,119	[9]5,982	[6]602	([6])	[9]913	[9]2,196	[9]229	[9]377
Bituminous coal	6	5,053	4,162	395	35	605	1,640	226	360
Richland	56	(NA)	(NA)	[6]338	([6])	(NA)	(NA)	(NA)	(NA)
Rock Island	6	[9]742	[9]479	40	20	[9]123	[9]175	[9]70	[9]22
St. Clair (mineral industries only)	26	(NA)	(NA)	[6]1,052	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	14	9,392	7,380	675	69	1,190	3,231	314	505
Nonmetallic minerals (except fuels) mining	7	3,011	2,336	282	15	598	1,014	73	129
Saline (mineral industries only)	36	(NA)	(NA)	[6]1,105	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	12	14,941	7,950	882	179	1,359	3,697	1,041	569
Sangamon (mineral industries only), total	9	947	757	134	15	211	442	68	50
Bituminous coal	4	624	526	93	9	119	313	43	20
Nonmetallic minerals (except fuels) mining	5	323	231	41	6	92	129	25	30
Schuyler	7	(NA)	(NA)	[6]48	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	4	121	106	24	...	47	65	...	...
Union	4	(NA)	(NA)	[6]58	([6])	(NA)	(NA)	(NA)	(NA)
Vermilion (including operations in manufactures), total	20	3,951	3,141	213	20	393	951	109	143
Bituminous coal	13	3,213	2,574	172	18	310	809	100	143
Nonmetallic minerals (except fuels) mining (including operations in manufactures)	7	738	561	41	2	83	142	9	...
Wabash, total	114	(NA)	(NA)	[6]455	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	111	(NA)	(NA)	[6]432	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	3	218	154	[6]23	([6])	43	[6]77	([6])	5
Washington, total	30	(NA)	(NA)	[6]82	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	26	(NA)	(NA)	[6]36	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal and Crushed and broken stone	4	216	168	46	...	66	102	...	20
Wayne	117	(NA)	(NA)	[6]725	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
White, total	150	(NA)	(NA)	[6]704	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	145	(NA)	(NA)	[6]641	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	5	1,368	1,264	47	16	97	184	51	209
Whiteside, total	11	369	256	33	3	82	117	16	7
Crushed and broken stone	3	259	171	23	3	65	88	16	3
Sand and gravel	8	110	85	10	...	17	29	...	4
Will	13	9,000	4,222	322	44	756	1,666	333	272
Crushed and broken stone	3	2,255	1,611	89	18	218	448	180	124
Williamson	28	23,558	17,674	1,948	100	3,168	8,307	567	3,644
Winnebago	15	1,980	1,559	134	23	318	693	128	180
Sand and gravel	10	1,646	1,379	122	23	289	619	128	160

D Withheld to avoid approximately disclosing figures of individual companies.

NA Not available.

[1]See table 1, footnote 6.

[2]See table 2, footnote 9.

[3]See table 2, footnote 5.

[4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.

[5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for such companies is included with the county data for the Crude petroleum and Natural gas industries.

[6]Figures for "All other employees" are included with those for "Production and development workers."

[7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

[8]Includes data for office employees for the Metal mining and Bituminous coal and lignite industries.

[9]Excludes data for one establishment in the Crude petroleum or Natural gas industry.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	County	All mineral operations			Metal mining			Bituminous coal	Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining (Dimension stone)		
		Total	Classified in mineral industries	Included in manufactures	Lead and zinc ores		Metal mining contract services		Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Limestone	Marble	Stone, n.e.c.
					Valued chiefly for lead	Valued chiefly for zinc								
1	Illinois, total.....	1,384	1,345	39	3	7	3	198	523	8	238	4	1	3
2	Adams.....	8	7	1	...	...	...	...	...	...		...	...	...
3	Alexander.....	4	4	...	...	...	...	...	...	...		...	1	...
4	Bond.....	13	13	...	...	...	...	...	9	...		...	...	...
5	Boone.....	4	4	...	...	...	...	...	...	...		...	...	...
6	Brown.....	3	2	1	...	...	...	...	...	...		...	...	...
7	Bureau.....	5	4	1	...	...	...	1	...	...		...	...	...
8	Calhoun.....	3	3	...	...	...	...	...	...	...		...	...	...
9	Carroll.....	4	4	...	...	...	...	...	...	...		...	...	...
10	Champaign.....	4	4	...	...	...	...	...	...	...		...	...	...
11	Christian.....	22	22	...	...	...	...	3	19	...		...	...	...
12	Clark.....	26	26	...	...	...	...	1	20	...		...	...	...
13	Clay.....	89	89	...	...	...	...	...	87	...		...	...	...
14	Clinton.....	54	54	...	...	...	...	2	51	...		...	...	...
15	Coles.....	36	36	...	...	...	...	...	32	...		...	...	...
16	Cook.....	20	15	5	...	...	...	...	3	...		1	...	1
17	Crawford.....	56	56	...	...	...	...	...	52	2		...	...	...
18	Cumberland.....	10	10	...	...	...	...	...	7	...		...	...	...
19	De Kalb.....	3	3	...	...	...	...	...	...	...		...	...	...
20	De Witt.....	1	1	...	...	...	...	...	...	...		...	...	...
21	Douglas.....	3	3	...	...	...	...	1	1	1		...	...	...
22	Du Page.....	4	3	1	...	...	...	...	...	...		...	...	...
23	Edgar.....	7	7	...	...	...	...	...	7	...		...	...	...
24	Edwards.....	67	66	1	...	...	...	...	66	...		...	...	...
25	Effingham.....	33	33	...	...	...	...	...	32	...		...	...	...
26	Fayette.....	47	47	...	...	...	...	...	43	1		...	...	...
27	Ford.....	2	2	...	...	...	...	...	1	...		...	...	...
28	Franklin.....	42	42	...	...	...	...	7	35	...		...	...	...
29	Fulton.....	25	25	...	...	...	...	24	...	...		...	...	...
30	Gallatin.....	66	66	...	...	...	...	5	59	...		...	...	...
31	Greene.....	6	6	...	...	...	...	1	...	...		...	...	...
32	Grundy.....	6	5	1	...	...	...	3	1	...		...	...	...
33	Hamilton.....	73	73	...	...	...	...	...	72	1		...	...	...
34	Hancock.....	6	6	...	...	...	...	1	1	...		...	...	...
35	Hardin.....	27	27	...	...	1	1	...	1	...	(NA)	...	...	...
36	Henderson.....	4	4	...	...	...	...	...	...	...		...	...	...
37	Henry.....	7	7	...	...	...	...	4	...	...		...	...	...
38	Jackson.....	8	8	...	...	...	...	7	...	...		...	...	...
39	Jasper.....	35	35	...	...	...	...	...	35	...		...	...	...
40	Jefferson.....	57	57	...	...	...	...	1	56	...		...	...	...
41	Jersey.....	3	3	...	...	...	...	...	...	...		...	...	...
42	Jo Daviess.....	14	14	...	3	6	2	...	...	...		...	...	...
43	Johnson.....	2	2	...	...	...	...	...	...	...		...	...	...
44	Kane.....	8	8	...	...	...	...	...	...	...		...	...	...
45	Kankakee.....	7	4	3	...	...	...	1	...	...		...	...	...
46	Kendall.....	3	3	...	...	...	...	...	...	...		...	...	...
47	Knox.....	7	6	1	...	...	...	5	...	...		...	...	...
48	Lake.....	8	7	1	...	...	...	...	...	...		...	...	...
49	La Salle.....	37	29	8	...	...	...	3	1	...		...	...	...
50	Lawrence.....	59	59	...	...	...	...	...	58	...		...	...	...
51	Lee.....	9	7	2	...	...	...	...	...	...		...	...	...
52	Livingston.....	11	10	1	...	...	...	2	...	...		...	...	...
53	Logan.....	3	3	...	...	...	...	1	...	...		...	...	...
54	McDonough.....	10	9	1	...	...	...	...	3	...		...	...	...
55	McHenry.....	9	9	...	...	...	...	...	...	...		...	...	...
56	McLean.....	3	3	...	...	...	...	...	...	...		...	...	...
57	Macon.....	10	10	...	...	...	...	...	7	...		...	...	...
58	Macoupin.....	5	5	...	...	...	...	4	1	...		...	...	...
59	Madison.....	33	31	2	...	...	...	4	20	...		1	...	...
60	Marion.....	55	55	...	...	...	...	1	52	2		...	...	...
61	Marshall.....	4	3	1	...	...	...	...	1	...		...	...	...
62	Mason.....	1	1	...	...	...	...	...	...	...		...	...	...
63	Massac.....	1	1	...	...	...	...	...	...	...		...	...	...
64	Menard.....	7	7	...	...	...	...	4	...	...		...	...	...
65	Mercer.....	2	1	1	...	...	...	...	...	...		...	...	...
66	Monroe.....	3	3	...	...	...	...	...	1	...		...	...	...
67	Montgomery.....	4	4	...	...	...	...	1	2	...		...	...	...
68	Ogle.....	12	12	...	...	...	...	...	...	...		...	...	...
69	Peoria.....	26	26	...	...	...	...	14	...	...		1	...	...
70	Perry.....	13	13	...	...	...	...	10	3	...		...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued															
Crushed and broken stone				Sand and gravel		Clay, ceramic, and refractory minerals				Natural abrasives, except sand	Chemical and fertilizer mineral mining		Nonmetallic minerals (except fuels) contract services	Peat	
Limestone		Sandstone	Stone, n.e.c.	Common sand and gravel	Foundry sand	Fire clay		Clay, ceramic, and refractory minerals, n.e.c.			Fluorspar	Chemical and fertilizer mineral mining, n.e.c.			
Classified in mineral industries	Included in manufactures[3]					Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures						
134	6	1	2	163	13	4	2	8	31	2	24	2	3	1	1
5	1	...	...	2	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	1	...	...	...	...	...	2	...	...	...	...	3
1	...	...	...	3	...	...	...	...	...	...	...	...	...	...	4
2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	2	...	...	...	...	1	...	...	...	...	...	6
...	...	...	...	3	...	...	...	...	1	...	...	...	...	...	7
2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	8
2	...	...	...	1	1	...	...	...	...	...	...	...	...	...	9
...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	10
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
3	...	...	...	2	...	...	...	...	...	...	...	...	...	...	12
1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	13
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
2	...	...	...	1	1	...	...	...	...	...	...	...	...	...	15
7	...	...	1	2	...	...	...	...	5	...	...	...	...	...	16
...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	17
...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	18
...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	19
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	20
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21
...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	22
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	24
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	26
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	27
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	29
...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	30
4	...	...	...	...	...	1	...	...	...	...	...	...	...	...	31
...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	32
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	33
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	34
5	...	...	...	...	...	...	...	...	...	...	17	...	2	...	35
4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36
...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	37
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	38
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	39
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40
2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	41
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	43
1	...	...	...	6	...	...	...	...	...	...	...	1	...	...	44
2	...	...	...	...	1	...	...	...	3	...	...	...	...	...	45
2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	46
...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	47
1	...	...	...	6	...	...	...	...	1	...	...	...	...	...	48
4	3	...	...	12	7	1	1	1	4	...	...	...	...	...	49
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	50
4	1	...	...	3	...	...	...	...	1	...	...	...	...	...	51
6	...	...	...	2	...	...	...	...	1	...	...	...	...	...	52
1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	53
2	...	...	...	...	...	2	...	2	1	...	...	...	...	...	54
1	...	...	...	8	...	...	...	...	...	...	...	...	...	...	55
...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	56
...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	57
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	58
3	...	...	...	3	...	...	...	...	2	...	...	...	...	...	59
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	60
...	...	...	...	2	...	...	...	...	1	...	...	...	...	...	61
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	62
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	63
2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	64
1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	65
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	66
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	67
5	...	1	...	6	...	...	...	...	...	...	...	...	...	...	68
4	...	...	...	7	...	...	...	...	...	...	...	...	...	...	69
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	70

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	County	All mineral operations			Metal mining			Bituminous coal	Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining (Dimension stone)		
		Total	Classified in mineral industries	Included in manufactures	Lead and zinc ores		Metal mining contract services		Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Limestone	Marble	Stone, n.e.c.
					Valued chiefly for lead	Valued chiefly for zinc								
	Illinois—Continued													
1	Pike	6	6	...	...	...	...	...	...	...		...	...	...
2	Pope	7	7	...	...	...	...	...	...	...		...	...	...
3	Pulaski	2	2	...	...	...	...	...	...	...		...	...	...
4	Randolph	11	11	...	...	...	...	6	1	...		...	...	...
5	Richland	56	56	...	...	...	...	...	56	...		...	...	...
6	Rock Island	7	6	1	...	...	...	...	1	...		...	...	...
7	St. Clair	27	26	1	...	...	...	14	5	...		...	...	...
8	Saline	37	36	1	...	...	...	12	24	...		...	...	...
9	Sangamon	11	9	2	...	...	...	4	...	...		...	...	...
10	Schuyler	7	7	...	...	...	...	4	1	...		...	...	...
11	Scott	1	1	...	...	...	...	...	...	...		...	...	...
12	Shelby	9	9	...	...	...	...	...	6	...		...	...	...
13	Stephenson	6	6	...	...	...	...	...	1	...	(NA)	...	...	...
14	Tazewell	6	5	1	...	...	...	1	...	...		...	...	...
15	Union	4	4	...	...	...	...	...	1	...		...	...	...
16	Vermilion	20	19	1	...	...	...	13	...	...		...	...	...
17	Wabash	114	114	...	...	...	...	...	111	...		...	...	...
18	Warren	3	3	...	...	...	...	1	1	...		...	...	...
19	Washington	30	30	...	...	...	...	2	26	...		...	...	...
20	Wayne	117	117	...	...	...	...	...	117	...		...	...	...
21	White	150	150	...	...	...	...	...	145	1		...	...	...
22	Whiteside	11	11	...	...	...	...	...	...	...		...	...	...
23	Will	13	13	...	...	...	...	2	...	...		1	...	2
24	Williamson	28	28	...	...	...	...	28	...	...		...	...	...
25	Winnebago	15	15	...	...	...	...	...	...	...		...	...	...
26	Woodford	1	1	...	...	...	...	...	...	...		...	...	...

NA Not Available.
[1]See table 3, footnote 4, and for county figures, table 3, footnote 7.
[2]See table 3, footnote 5.
[3]See table 2, footnote 1.

BY INDUSTRY AND COUNTY: 1954—Continued

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued															
Crushed and broken stone				Sand and gravel		Clay, ceramic, and refractory minerals				Natural abrasives, except sand	Chemical and fertilizer mineral mining		Nonmetallic minerals (except fuels) contract services	Peat	
Limestone		Sandstone	Stone, n.e.c.	Common sand and gravel	Foundry sand	Fire clay		Clay, ceramic, and refractory minerals, n.e.c.			Fluorspar	Chemical and fertilizer mineral mining, n.e.c.			
Classified in mineral industries	Included in manufactures					Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures						
4	...	...	...	2	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	7	...	...	...	2
1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	3
3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
4	...	...	...	1	...	...	...	...	1	...	...	...	...	...	6
4	...	...	...	1	...	...	...	1	1	...	...	1	...	...	7
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	8
...	...	...	...	4	...	...	...	1	2	...	...	...	...	...	9
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	12
4	...	...	1	...	...	...	...	...	...	...	...	...	...	...	13
...	...	...	...	3	...	...	...	1	1	...	...	...	...	...	14
2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	15
1	...	...	...	5	...	...	...	...	1	...	...	...	...	...	16
...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	17
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20
...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	21
3	...	...	...	8	...	...	...	...	...	...	...	...	...	...	22
3	...	...	...	5	...	...	...	...	...	...	...	...	...	...	23
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24
4	...	...	...	9	1	...	...	...	...	...	...	...	1	...	25
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	26

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Illinois, all mineral operations:												
Including operations classified in manufactures	1,384	129	551	225	210	151	52	46	11	9	...	...
Mineral industries only	1,345	129	530	216	206	147	51	46	11	9	...	...
Metal mining, total	13	2	7	...	1	3	...	...	...	...	...	...
Lead and zinc ores:												
Ores valued chiefly for lead	3	2	1	...	...	...	...	...	...	...	...	...
Ores valued chiefly for zinc	7	...	3	...	1	3	...	...	...	...	...	...
Metal mining contract services	3	...	3	...	...	...	...	...	...	...	...	...
Bituminous coal	198	14	39	29	22	27	22	30	9	6	...	...
Crude petroleum and natural gas extraction, total	769	68	363	115	111	81	19	8	1	3	...	...
Crude petroleum and natural gas	523	65	291	70	42	34	11	6	1	3	...	...
Natural gas liquids	8	...	2	...	1	3	2	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	137	2	32	15	50	32	4	2	...	...	...	...
Oil and gas field contract services, n.e.c.	101	1	38	30	18	12	2	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	404	45	142	81	76	40	11	8	1	...	...	...
Mineral industries only	365	45	121	72	72	36	10	8	1	...	...	...
Dimension stone:												
Limestone	4	...	4	...	...	...	...	...	...	...	...	...
Marble	1	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	3	1	2	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	134	5	42	29	31	16	6	5	...	...	...	...
Included in manufactures and wholesale trade	6	...	...	...	2	3	1	...	...	...	...	...
Sandstone	1	...	...	...	...	1	...	...	...	...	...	...
Stone, n.e.c.	2	...	2	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	163	28	54	28	32	16	2	3	...	...	...	...
Foundry sand	13	1	4	6	2	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	4	1	2	1	...	...	...	...	...	...	...	...
Included in manufactures	2	...	1	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	8	1	6	1	...	...	...	...	...	...	...	...
Included in manufactures	31	...	20	9	1	1	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	2	...	...	...	1	1	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Fluorspar	24	6	4	5	5	1	2	...	1	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	2	2	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	3	...	...	2	...	1	...	...	...	...	...	...
Peat	1	...	...	...	1	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Water intake (except mine water): Million gallons per production worker[3]	Water intake (except mine water): Gallons per dollar value added	Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons): Used	Mine water (mil. gallons): Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Illinois, total	26,627	375,191	20,496	0.77	55	15,938	7,309	12,595	65,132	2	71	20	7
Metal mining, total	89	1,266	1	0.01	1	1	794	1,781	1,095	...	...	100	...
Lead and zinc ores	84	1,239	1	0.01	1	1	794	1,781	1,095	...	...	100	...
Metal mining contract services	5	27	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	13,491	129,161	2,724	0.20	21	1,847	2,062	4,338	16,757	5	64	21	10
Crude petroleum and natural gas extraction, total	8,567	[4]190,222	7,974	0.93	42	4,602	xxx	xxx	[5]26,131	2	28	55	15
Crude petroleum and Natural gas	5,250	150,753	7,499	1.43	50	4,419	xxx	xxx	(NA)	([5])	25	59	[6]16
Natural gas liquids	244	([4])	354	1.45	(NA)	180	xxx	xxx	18,511	21	50	29	...
Oil and gas field contract services:													
Drilling oil and gas wells	2,133	23,777	119	0.06	5	1	xxx	xxx	(NA)	10	46	2	[6]42
Oil and gas field contract services, n.e.c.	940	6,325	2	([7])	([7])	2	xxx	xxx	(NA)	...	100	...	...
Nonmetallic minerals (except fuels) mining, total	4,480	54,542	9,797	2.19	180	9,488	4,453	6,476	21,149	2	88	6	4
Stone (dimension, crushed, and broken), total	2,211	27,710	484	0.22	17	424	196	1,985	680	6	79	15	...
Crushed and broken limestone	2,171	27,396	418	0.19	15	358	196	1,985	614	7	91	2	...
Other stone	40	314	66	1.65	210	66	...	...	66	...	...	100	...
Sand and gravel:													
Common sand and gravel	1,552	19,975	8,841	5.70	443	8,627	4,074	...	19,737	...	90	6	[8]4
Foundry sand	63	437	...	...	...	...	5	11	5	...	...	...	...
Fluorspar	545	5,426	472	0.87	87	437	178	4,480	727	28	72	...	...
Other nonmetallic minerals (except fuels) mining industries	109	994	...	...	...	...	...	...	...	...	...	...	...

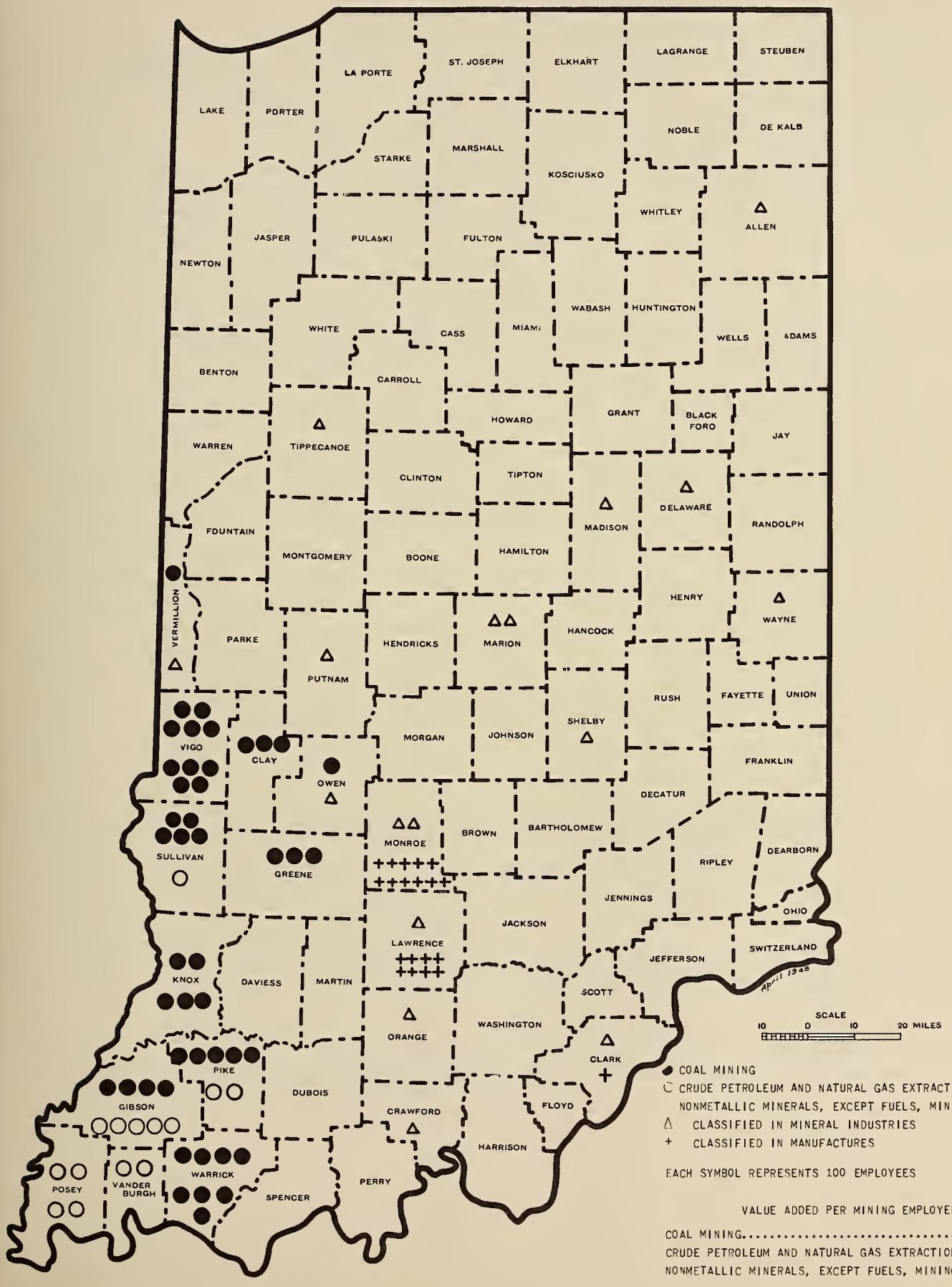
NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 4,273 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]See table 2, footnote 5.
[5]For industries other than Natural gas liquids, includes water intake only.
[6]Includes "not specified" as follows: for Crude petroleum and Natural gas, 2 percent; for Drilling oil and gas wells, 35 percent.
[7]Less than one-half of the unit of measure specified.
[8]Represents "not specified."

INDIANA

113-1

MINING IN INDIANA: 1954

Rank among States:
Employment, 23
Value of shipments, 22



VALUE ADDED PER MINING EMPLOYEE

COAL MINING	$8,300
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	13,500
NONMETALLIC MINERALS, EXCEPT FUELS, MINING	8,200

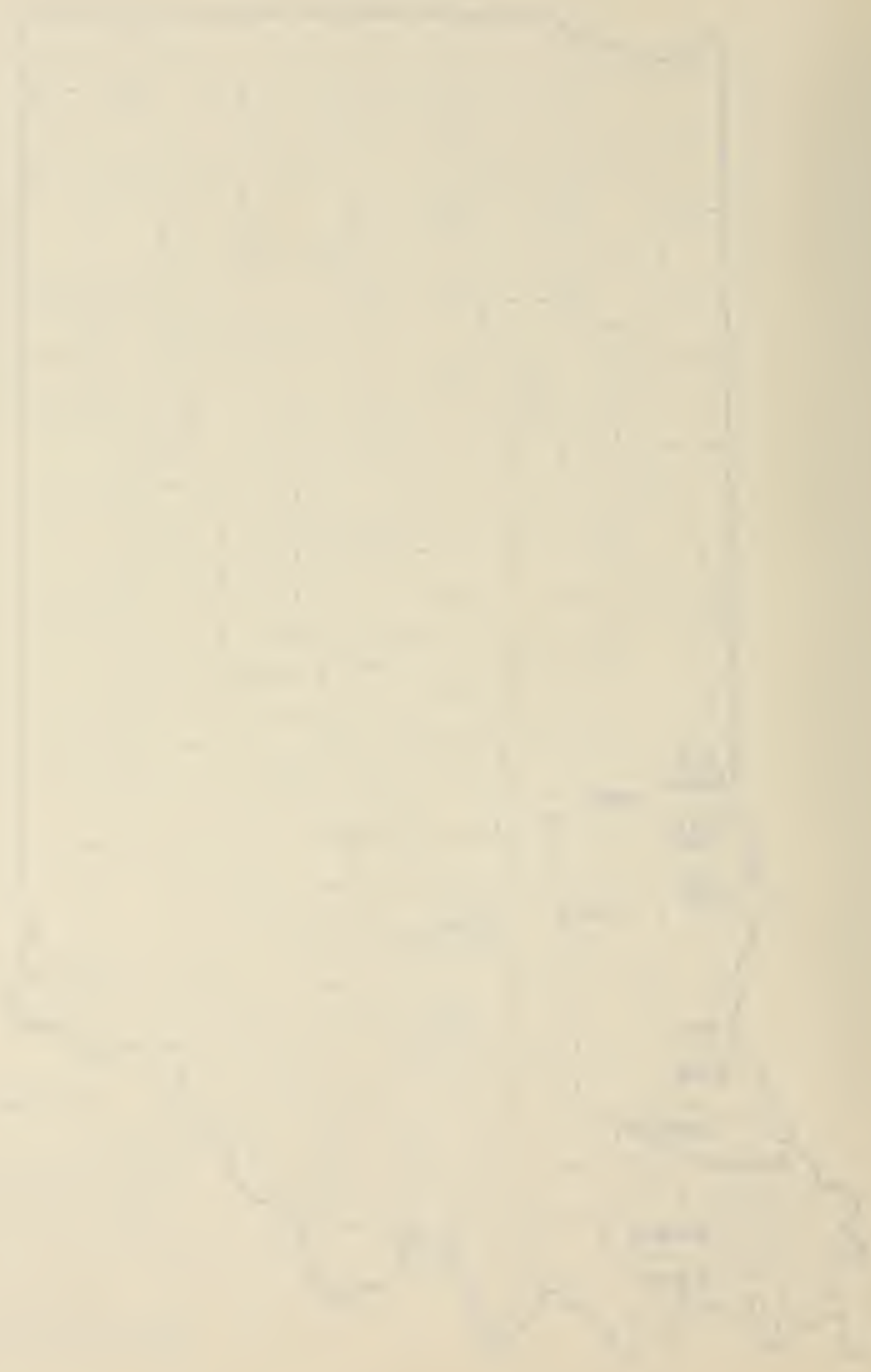


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations					
	1954	1939[1]	1929[2]	1954	1939[1]	1929[2]	1919[3]	1909[3]	1902[4]
Number of operating companies	749	527	(NA)	511	[5]451	(NA)	(NA)	[5]1,014	[5]3,914
Number of establishments	815	(NA)	399	553	(NA)	341	503	1,035	(NA)
Number of mines and quarries	483	455	452	4,009	363	381	398	485	595
Number of oil and gas wells producing at end of year	3,791	1,885	(NA)	...	1,885	(NA)	2,456	10,373	14,203
Number of preparation plants	282	153	(NA)	113	82	(NA)	(NA)	(NA)	(NA)
Value of shipments[6]...$1,000	145,816	37,387	48,993	129,993	32,735	44,540	52,840	21,934	26,939
Value added in mining...do	98,331	28,094	40,995	86,103	24,329	37,525	44,065	19,210	21,353
Number of persons engaged, total	11,744	12,810	18,279	10,140	11,847	17,356	28,738	27,686	17,511
Production and development workers	9,576	11,398	16,742	8,403	10,632	16,004	26,751	23,952	[7]15,906
All other employees	1,463	998	[8]1,242	1,253	843	[8]1,073	1,648	1,105	1,606
Proprietors and firm members	705	414	295	484	372	279	339	2,629	(NA)
Performing manual labor	339	237	(NA)	189	222	(NA)	164	181	(NA)
Man-hours worked by production and development workers...1,000	17,863	18,542	(NA)	15,063	16,964	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	95,632	25,147	34,447	86,635	23,116	32,011	43,046	18,619	17,412
Wages of production and development workers...do	36,443	13,671	23,376	31,973	12,850	22,392	30,193	14,793	10,463
Salaries of all other employees...do	8,669	2,183	[8]3,073	7,586	1,860	[8]2,604	4,078	1,102	1,363
Minerals received for preparation...do	18,429	(NA)	(NA)	18,429	(NA)	(NA)	51	23	(NA)
Supplies...do	[9]19,708	5,636	5,144	17,740	5,170	4,737	6,371	1,846	3,400
Fuel[10]...do	[9]2,387	842	861	1,694	680	730	1,737	553	
Purchased electric energy...do	[9]3,407	1,477	1,879	2,912	1,230	1,471	276		
Contract work...do	[9]6,589	1,338	114	6,301	1,326	77	340	302	2,186
Purchased machinery installed...do	[11]13,270		1,596	11,323		1,289	(NA)		
Capital expenditures, total...do	[11]16,305	(NA)	(NA)	14,509	(NA)	(NA)	(NA)		
Development and exploration of mineral property...do	[11]3,020		366	2,984		366	2,111	(NA)	(NA)
Preparation plant construction...do	[11]670	443		435	410				
Other construction...do	[11]1,027		(NA)	990		(NA)	(NA)		
New machinery and equipment...do	[11]10,442	1,513		9,271	1,389				
Used plant and equipment...do	[11]1,146	370		829	324				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	[11]572	239	189	449	208	157	130	95	132
Per production worker	60	21	11	53	20	10	5	4	8
Prime movers...1,000	[11]346	100	61	255	89	50	101	94	132
Electric motors driven by purchased energy...do	[11]226	139	128	194	119	107	29	1	([12])
Horsepower rating of electric motors driven by energy generated at establishment...do	[11]14	18	10	12	18	10	43	10	4
Energy used...million kwh equivalent	[11]1,506	1,888	3,643	1,263	1,693	3,332	(NA)		
Coal[13]...1,000 short tons	[11]59	201	459	54	180	422	782		
Fuel oils[13]...1,000 barrels	[11]158	36	2	119	35	1	1		
Gas[13]...million cu.ft	[11]725	292	...	717	292	...	330	(NA)	(NA)
Electric energy purchased...million kwh	[11]214	94	104	187	82	81	(NA)		
Electric energy generated and used...do	[11]14	11	4	13	11	4	(NA)		

NA Not available.

[1]Except for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing limestone at such operations was $1,119,000; this value has been included in the value of shipments and value added in mining. Includes data for one or two oil and gas field hauling operations, with receipts for services amounting to less than $417,000; such operations were not classified in the mineral industries for 1954.

[2]Excludes data for crude petroleum and natural gas extraction and common clay and shale establishments. The value of products and amount received for services at such oil and gas operations in 1939 was about $2,417,000, and the value of products of such clay operations was $154,000.

[3]Excludes data for stone quarries operated as part of cement and lime plants. The value of products of such quarries in 1939 was $457,000.

[4]Includes data for lime plants producing lime valued at $312,000.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[10]For 1954 excludes, but for earlier years includes, data for fuels produced and used for power or heat at the same establishment.

[11]Excludes statistics for crushed stone and clay operations classified in manufactures.

[12]Represents less than one-half of unit of measure specified.

[13]Includes fuels produced and used for power or heat at the same establishment.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Indiana, total		Bituminous coal mining		Crude petroleum and natural gas extraction			
								Oil and gas field contract services	
		Including operations classified in manufactures	Mineral industries only	Total	Bituminous coal only	Total	Crude petroleum and natural gas	Drilling oil and gas wells	Oil and gas field contract services, n.e.c.
1	Number of operating companies	749	713	84	81	327	249	54	25
2	Number of establishments	815	776	101	98	329	250	54	25
	Number of mines, quarries, and producing oil and gas wells:								
3	1954	4,274	4,235	99	99	3,791	3,717	72	2
4	1939	2,340	(NA)	266	266	1,885	(NA)	(NA)	(NA)
5	Number of preparation plants	282	274	27	27	xxx	xxx	xxx	xxx
	Value of shipments:[1]								
6	1954.....$1,000	145,816	129,720	69,327	69,313	30,687	26,188	3,177	1,322
7	1939.....do	[2]37,387	(NA)	[3]25,176	25,176	[2]2,417	1,694	572	[2]151
8	Value added in mining.....do	98,331	85,201	39,598	39,588	23,315	19,951	2,330	1,034
9	Number of persons engaged, total	11,744	9,889	4,836	4,830	2,059	1,477	405	177
10	Production and development workers	9,576	7,782	4,156	4,153	1,268	807	328	133
11	All other employees	1,463	1,402	591	591	456	431	8	17
12	Proprietors and firm members	705	705	89	86	335	239	69	27
13	Performing manual labor	339	339	51	48	111	57	38	16
	Man-hours worked by production and development workers:								
14	1954.....1,000	17,863	14,304	6,768	6,764	2,118	1,304	555	259
15	1939.....do	[2]18,542	(NA)	[3]12,976	12,976	[2]928	700	116	[2]112
	At mines:								
16	Underground.....do	2,967	2,967	2,935	2,935	xxx	xxx	xxx	xxx
17	Open-pit.....do	6,089	4,413	1,730	1,726	xxx	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.).....do	[4]484	[4]254	2,103	2,103	xxx	xxx	xxx	xxx
19	At preparation plants.....do	[4]6,205	[4]4,552			xxx	xxx	xxx	xxx
20	At oil and gas field operations.....do	2,118	2,118	xxx	xxx	2,118	1,304	555	259
21	Man-hours spent on development and exploration work (included above).....do	963	963	87	87	845	273	529	43
22	Principal expenses designated below, total.....$1,000	95,632	85,808	51,262	51,251	16,908	13,921	2,042	945
23	Wages of production and development workers.....do	36,443	29,866	17,670	17,663	3,729	2,426	946	357
24	Salaries of all other employees.....do	8,669	8,287	3,951	3,951	2,555	2,257	28	270
25	Minerals received for preparation.....do	18,429	18,418	18,418	18,418	xxx	xxx	...	xxx
26	Supplies.....do	[5]19,708	17,339	8,730	8,730	4,280	3,243	813	224
	Purchased fuel:								
27	Coal.....do	[5]136	62	...	...	5	...	5	...
28	Fuel oil.....do	[5]788	776	275	275	121	92	27	2
29	Gas.....do	[5]50	50	...	...	40	38	2	...
30	Other fuels.....do	[5]1,413	1,373	194	190	345	193	112	40
31	Purchased electric energy.....do	[5]3,407	3,139	1,841	1,841	307	306	1	...
32	Contract work.....do	[5]6,589	6,498	183	183	5,526	5,366	108	52
33	Purchased machinery installed.....do	[6]13,270	12,772	6,898	6,849	2,399	2,059	270	70
34	Capital expenditures, total.....do	[6]16,305	15,908	6,810	6,761	5,651	5,060	491	100
35	Development and exploration of mineral property.....do	[6]3,020	3,020	266	266	2,700	2,524	407	53
36	Preparation plant construction.....do	[6]670	665	209	209	xxx	xxx		
37	Other construction.....do	[6]1,027	1,000	650	650	294	283		
38	New machinery and equipment.....do	[6]10,442	10,108	5,443	5,394	2,419	2,146		
39	Used plant and equipment.....do	[6]1,146	1,115	242	242	238	107	84	47
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	[6]572	544	237	237	76	55	15	6
41	Per production worker	60	57	57	57	60	68	46	45
42	Prime movers.....1,000	[6]346	339	117	117	61	40	15	6
43	Electric motors driven by purchased energy.....do	[6]226	205	120	120	15	15	...	...
44	Horsepower rating of electric motors driven by energy generated at establishment.....do	[6]14	14	9	9	2	2	...	...
45	Energy used.....million kwh equivalent	[6]1,506	1,369	535	534	366	307	49	10
	Produced and used for fuel:								
46	Coal.....1,000 short tons	35	35	35	35	xxx	xxx	xxx	xxx
47	Crude petroleum.....1,000 barrels	3	3	xxx	xxx	3	3	...	...
48	Natural gas.....million cu.ft	364	364	xxx	xxx	364	364	...	...
	Purchased fuel:								
49	Coal.....1,000 short tons	[6]24	10	...	...	1	...	1	...
50	Fuel oil.....1,000 barrels	[6]155	153	50	50	21	16	5	(7)
51	Gas.....million cu.ft	[6]361	361	...	...	332	317	15	...
52	Electric energy purchased.....million kwh	[6]214	198	132	132	17	17	...	...
53	Electric energy generated and used.....do	[6]14	14	8	8	4	4	...	...
54	Water intake, including mine water used.....million gallons	[6]14,386	14,132	2,169	2,169	595	590	4	1
55	Per production worker.....do	1.55	1.82	0.52	0.52	0.47	0.73	0.01	0.01

xxx Not applicable. D Withheld to avoid approximately disclosing data for individual companies. NA Not available.

[1]See table 1, footnote 6. [2]See table 1, footnote 1.

[3]Figures for Bituminous coal mining contract services are included with those for Nonmetallic minerals (except fuels) contract services.

[4]Combined figures for man-hours at surface and at preparation plants for the Bituminous coal industry are included with those for preparation plants since 84 percent of all marketable coal was cleaned in Indiana.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining													
Total		Dimension stone			Crushed and broken stone		Sand and gravel		Clay, ceramic, and refractory minerals			Other nonmetallic minerals (except fuels) industries	
		Limestone							Fire clay				
Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures	Mineral industries only	Sandstone	All stone (including operations classified in manufactures)	Limestone (mineral industries only)	Common sand and gravel	Foundry sand	Including operations classified in manufactures	Mineral industries only	Clay, ceramic, and refractory minerals, n.e.c.		
338	302	15	8	4	69	64	204	3	11	8	31	9	1
385	346	18	10	4	78	73	226	5	14	9	31	9	2
384	345	18	10	4	75	70	229	5	15	10	31	7	3
189	(NA)	16	(NA)	...	70	63	67	6	9	(NA)	19	2	4
255	247	8	...	...	71	70	160	3	1	1	6	6	5
45,802	29,706	13,606	1,760	377	14,789	12,103	13,689	451	1,119	947	1,683	88	6
9,794	(NA)	3,443	(NA)	...	2,586	2,129	3,236	143	119	(NA)	154	[3]113	7
35,418	22,288	11,399	1,517	349	10,662	8,495	10,593	359	709	675	1,276	71	8
4,849	2,994	1,864	224	51	1,233	1,124	1,445	27	76	56	132	21	9
4,152	2,358	1,783	204	48	1,067	960	1,031	24	67	47	118	14	10
416	355	79	18	2	122	122	207	3	3	3	...	...	11
281	281	2	2	1	44	42	207	...	6	6	14	7	12
177	177	2	2	1	16	15	142	...	4	4	8	4	13
8,977	5,418	3,509	381	117	2,383	2,168	2,515	51	140	100	234	28	14
[2]4,638	(NA)	[2]1,134	(NA)	...	1,748	(NA)	1,359	72	107	(NA)	147	[3]71	15
32	32	...	...	...	25	25	...	...	7	7	...	...	16
4,359	2,683	1,606	361	60	1,142	939	1,191	25	110	70	204	21	17
484	254	250	20	57	174	174	...	...	...	...	3	...	18
4,102	2,449	1,653	...	...	1,042	1,030	1,324	26	23	23	27	7	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
31	31	...	...	...	30	30	1	...	...	...	...	...	21
27,462	17,638	9,090	961	213	8,412	7,572	8,034	197	697	483	766	53	22
15,044	8,467	6,530	646	161	3,564	3,243	4,016	93	283	207	361	36	23
2,163	1,781	464	82	5	604	604	1,069	14	7	7	...	...	24
11	...	11	...	...	...	...	(NA)	(NA)	...	...	...	...	25
[5]6,698	4,329	1,523	156	35	[5]2,946	2,432	1,543	42		85		3	26
[5]131	57	79	5	xxx	[5]13	13	33	2		...		...	27
[5]392	380	13	1	3	[5]163	163	171	28		13		...	28
[5]10	10	3	3	...	[5]5	5	1	...	407	...	405	...	29
[5]874	834	48	8	4	[5]344	339	444	3		12		14	30
[5]1,259	991	299	31	3	[5]453	453	477	10		9		...	31
[5]880	789	120	29	2	[5]320	320	280	5		150		...	32
[6]3,973	3,475	547	49	28	[6]1,281	1,281	1,880	27		165		5	33
[6]3,844	3,447	436	39	47	[6]1,398	1,398	1,733	25		162		5	34
[6]54	54	...	...	1	[6]17	17	36	...		...		...	35
[6]461	456	5	...	7	[6]214	214	218	17		...		...	36
[6]83	56	27	...	2	[6]16	16	37	...		1		...	37
[6]2,580	2,246	356	22	17	[6]957	957	1,155	8		74		5	38
[6]666	635	48	17	20	[6]194	194	287	...		87		...	39
[6]259	231	34	6	2	[6]94	93	118	3		4		2	40
62	98	19	28	35	88	97	115	116		83		143	41
[6]168	161	10	3	2	[6]59	58	88	2		4		2	42
[6]91	70	24	3	([7])	[6]35	35	30	1		([7])		...	43
[6]3	3	...	...	...	[6]1	1	2	...	(NA)	...	(NA)	...	44
605	468	150	13	3	[6]193	192	233	12		8		4	45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx		xxx		xxx	46
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx		xxx		xxx	47
444	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx		xxx		xxx	48
[6]23	9	15	1	...	[6]3	2	5	([7])		...		...	49
[6]84	82	2	...	1	[6]39	39	32	7		3		...	50
[6]29	29	7	7	...	[6]14	14	6	...		...		...	51
[6]65	49	17	1	...	[6]21	21	27	...		...		([7])	52
[6]2	2	...	...	...	[6]1	1	1	...		...		...	53
[6]11,622	11,368	268	14	(D)	[6]1,770	1,770	9,573	...		...		...	54
2.80	4.82	0.15	0.07	(D)	1.66	1.84	9.29	...		...		...	55

[5]See table 1, footnote 9.
[6]See table 1, footnote 11.
[7]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Indiana, all mineral operations:									
Including operations in manufactures	815	145,816	98,331	9,576	1,463	17,863	36,443	8,669	[2]15,159
Mineral industries only:									
Including crude petroleum and natural gas extraction	776	129,720	85,201	7,782	1,402	14,304	29,866	8,287	14,793
Excluding crude petroleum and natural gas extraction	447	99,033	61,886	6,514	946	12,182	26,137	5,732	9,380
Bituminous coal mining	101	69,327	39,598	4,156	591	6,768	17,670	3,951	6,568
Crude petroleum and natural gas extraction, total	329	30,687	23,315	1,268	456	2,118	3,729	2,555	5,413
Crude petroleum and natural gas[3]	250	26,188	19,951	807	431	1,304	2,426	2,257	4,953
Oil and gas field contract services[4]	79	4,499	3,364	461	25	814	1,303	298	460
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	385	45,802	35,418	4,152	416	8,977	15,044	2,163	[2]3,178
Mineral industries only	346	29,706	22,288	2,358	355	5,418	8,467	1,781	2,812
Dimension stone:									
Including operations in manufactures	22	13,983	11,748	1,831	81	3,626	6,691	469	415
Mineral industries only	14	2,137	1,517	252	20	498	807	87	49
Crushed and broken stone (including operations in manufactures)	78	14,789	10,662	1,067	122	2,383	3,564	604	[2]1,204
Sand and gravel	231	14,140	10,952	1,055	210	2,566	4,109	1,083	1,471
Clay, ceramic, and refractory minerals (including operations in manufactures)	45	2,802	1,985	185	3	374	644	7	[2]83
Natural abrasives, except sand, Nonmetallic minerals (except fuels) contract services, and Miscellaneous nonmetallic minerals (except fuels)	9	88	71	14	...	28	36	...	5
COUNTY									
Adams (including operations in manufactures)	5	389	293	45	5	94	145	24	[2]61
Allen	5	853	642	37	52	70	176	191	54
Carroll	7	354	209	24	12	59	80	61	90
Cass	4	386	291	40	1	79	120	7	9
Clark (mineral industries only)	5	826	728	71	6	212	263	41	152
Clay:									
Including operations in manufactures	20	(NA)	(NA)	350	38	(NA)	(NA)	(NA)	(NA)
Mineral industries only	17	(NA)	(NA)	340	38	(NA)	(NA)	(NA)	(NA)
Bituminous coal	10	3,927	3,063	307	38	469	1,276	196	45
Clay, ceramic, and refractory minerals (mineral industries only)	3	477	310	15	...	35	84	...	...
Daviess:									
Including crude petroleum and natural gas	13	(NA)	(NA)	[5]70	([5])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	4	371	321	[5]39	([5])	72	[5]137	([5])	64
Decatur	6	220	165	[5]37	([5])	50	[5]73	([5])	54
De Kalb	6	200	172	17	...	42	67	...	16
Delaware	8	875	685	77	11	203	302	37	50
Crushed and broken stone	3	466	366	45	4	124	179	14	1
Dubois:									
Including crude petroleum and natural gas	9	(NA)	(NA)	[5]24	([5])	...	...	...	...
Excluding crude petroleum and natural gas	6	138	102	[5]20	([5])	36	[5]58	([5])	...
Elkhart	6	376	270	24	4	61	105	18	29
Fountain (mineral industries only)	5	444	359	36	7	71	129	28	6
Gibson	86	(NA)	(NA)	[5]631	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	81	(NA)	(NA)	[5]267	([5])	(NA)	(NA)	(NA)	(NA)
Greene (including operations in manufactures)	13	4,636	2,734	299	51	421	1,280	257	[2]280
Bituminous coal	10	4,494	2,714	280	48	379	1,239	255	279

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Hamilton	10	371	293	32	1	72	119	1	64
Harrison	3	169	123	22	1	45	49	3	...
Henry	8	(NA)	(NA)	[5]12	([5])	(NA)	(NA)	(NA)	(NA)
Howard	3	357	294	32	...	80	119	...	38
Huntington (mineral industries only)	3	(NA)	(NA)	[5]26	([5])	(NA)	(NA)	(NA)	(NA)
Jackson (mineral industries only)	4	207	163	22	...	49	72	...	19
Jay	6	110	83	[5]16	([5])	27	[5]37	([5])	3
Knox, total	33	(NA)	(NA)	[5]553	([5])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	5	5,199	3,788	450	44	744	2,001	290	94
Crude petroleum and natural gas[6]	23	(NA)	(NA)	[5]27	([5])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	5	415	316	28	4	58	97	33	87
Lake (mineral industries only)	4	164	134	12	...	20	34	...	2
La Porte	7	390	305	19	3	41	77	11	34
Lawrence (mineral industries only)	6	1,052	785	84	13	174	258	51	49
Madison	11	858	543	39	18	101	191	99	34
Marion	12	2,598	2,142	140	214	349	621	1,417	292
Martin (mineral industries only)	4	(NA)	(NA)	[5]26	([5])	(NA)	(NA)	(NA)	(NA)
Monroe:									
Including operations in manufactures	18	8,267	6,528	894	68	1,671	3,082	418	290
Mineral industries only	11	1,847	1,488	190	14	345	576	64	124
Montgomery (mineral industries only)	6	233	200	11	...	22	30	...	1
Morgan (mineral industries only)	6	118	81	13	...	29	35	...	25
Orange	5	342	220	43	7	108	123	28	24
Owen	8	1,110	894	112	13	200	415	61	87
Parke (mineral industries only)	8	504	382	[5]41	([5])	87	[5]159	([5])	109
Perry (mineral industries only)	5	338	239	[5]27	([5])	71	115	([5])	(D)
Pike, total	55	(NA)	(NA)	[5]627	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	48	(NA)	(NA)	[5]102	([5])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	7	7,293	6,282	442	83	722	1,943	573	352
Porter	7	208	186	14	2	23	46	10	12
Posey	77	(NA)	(NA)	[5]267	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	74	(NA)	(NA)	[5]256	([5])	(NA)	(NA)	(NA)	(NA)
Putnam (minerals industries only)	6	1,332	849	64	15	145	231	54	60
Randolph	5	160	115	17	2	31	41	4	14
Ripley	3	171	123	28	4	59	67	10	11
Rush	7	208	152	[5]37	([5])	45	[5]71	([5])	10
St. Joseph	7	726	425	35	6	89	185	66	135
Shelby	7	675	469	[5]67	([5])	130	[5]230	([5])	31
Spencer (mineral industries only):									
Including crude petroleum and natural gas	23	(NA)	(NA)	[5]38	([5])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	3	142	121	[5]14	([5])	29	[5]37	([5])	...
Steuben	7	239	159	19	2	59	89	8	77
Sullivan, total	29	(NA)	(NA)	[5]569	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas	13	(NA)	(NA)	[5]52	([5])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	12	5,589	3,309	441	45	695	1,869	260	214
Nonmetallic minerals (except fuels) mining	4	215	169	27	4	54	80	32	63
Vanderburgh (mineral industries only)	41	(NA)	(NA)	[5]236	([5])	(NA)	(NA)	(NA)	(NA)
Vermillion, total	10	1,593	1,183	167	16	344	605	82	250
Bituminous coal	4	616	526	77	4	105	270	36	204
Nonmetallic minerals (except fuels) mining	6	977	657	90	12	239	335	46	46
Vigo (mineral industries only), total	23	(NA)	(NA)	[5]1,222	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas	8	(NA)	(NA)	[5]191	([5])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	12	9,984	7,263	933	73	1,702	4,219	406	623
Nonmetallic minerals (except fuels)	3	187	160	23	3	45	73	15	...
Wabash	8	(NA)	(NA)	[5]10	([5])	(NA)	(NA)	(NA)	(NA)
Warrick	27	(NA)	(NA)	[5]863	([5])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	23	28,210	9,526	753	90	1,207	2,986	551	4,696
Wayne	5	576	464	54	6	122	200	29	56
Wells	5	297	221	27	4	55	80	15	6

NA Not available.

[1]See table 1, footnote 6.

[2]See table 1, footnote 11.

[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.

[4]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for such companies is included with the county data for the Crude petroleum and Natural gas industries.

[5]Figures for "All other employees" are included with those for "Production and development workers."

[6]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Indiana, total	Adams	Allen	Bartholomew	Benton	Blackford	Boone	Carroll	Cass	Clark
All operations, total	815	5	5	4	1	3	3	7	4	7
Classified in mineral industries	776	4	5	4	1	3	3	7	4	5
Included in manufactures	39	1	1	...	...	...	...	...	...	2
Bituminous coal mining:										
Bituminous coal	98	...	...	...	...	...	...	...	...	...
Bituminous coal mining contract services	3	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[2]	250	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	79	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	10	...	...	...	...	...	...	...	...	...
Included in manufactures	8	...	...	...	...	...	...	...	...	...
Sandstone	4	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	73	3	1	1	...	1	...	1	2	2
Included in manufactures	3	...	...	...	...	...	...	...	...	1
Stone, n.e.c.	2	...	...	...	...	...	...	...	...	...
Sand and gravel:										
Common sand and gravel	226	1	3	3	1	...	3	6	2	3
Foundry sand	5	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fire clay:										
Classified in mineral industries	9	...	...	...	...	...	...	...	...	...
Included in manufactures	5	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	8	...	1	...	...	1	...	...	...	...
Included in manufactures	23	1	...	...	...	...	...	...	...	1
Natural abrasives, except sand	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	2	...	...	...	...	...	...	...	...	...
Peat	6	...	...	...	...	1	...	...	...	...

	Clay	Clinton	Crawford	Daviess	Dearborn	Decatur	De Kalb	Delaware	Dubois	Elkhart
All operations, total	20	2	3	13	1	6	6	8	9	6
Classified in mineral industries	17	2	3	13	1	6	6	8	9	6
Included in manufactures	3	...	...	...	...	...	...	...	...	...
Bituminous coal mining:										
Bituminous coal	10	...	...	2	...	...	...	...	4	...
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[2]	2	1	1	9	...	2	...	1	3	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	...	...	...	...	...	1	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Sandstone	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	...	2	...	...	3	...	3	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...
Sand and gravel:										
Common sand and gravel	1	1	...	2	1	...	6	4	1	6
Foundry sand	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fire clay:										
Classified in mineral industries	3	...	...	...	...	...	...	...	1	...
Included in manufactures	2	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...
Natural abrasives, except sand	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.--NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954--Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Fayette	Fountain	Franklin	Fulton	Gibson	Grant	Greene	Hamilton	Hancock	Harrison
All operations, total	3	7	2	3	86	2	13	10	2	3
Classified in mineral industries	3	5	2	3	86	2	12	10	2	3
Included in manufactures	...	2	...	...	...	...	1	...	...	...
Bituminous coal mining:										
Bituminous coal	...	2	...	...	3	...	10	...	...	...
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[2]	...	...	...	...	81	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	...	...	...	...	1	...	1	...	2
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	1
Sand and gravel:										
Common sand and gravel	3	2	1	3	2	...	2	8	2	...
Foundry sand	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fire clay:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c:										
Classified in mineral industries	...	1	1	...	...	...	...	...	...	...
Included in manufactures	...	2	...	...	...	...	1	...	...	...
Natural abrasives, except sand	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	1	...	1	...	...

	Hendricks	Henry	Howard	Huntington	Jackson	Jasper	Jay	Jefferson	Jennings	Johnson
All operations, total	1	8	3	4	6	3	6	1	2	1
Classified in mineral industries	1	8	3	3	4	3	6	1	2	1
Included in manufactures	...	...	...	1	2	...	...	...	...	...
Bituminous coal mining:										
Bituminous coal	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[2]	...	2	...	1	...	...	4	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	...	1	1	...	1	1	1	1	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...
Sand and gravel:										
Common sand and gravel	1	6	2	1	3	2	...	...	1	1
Foundry sand	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fire clay:										
Classified in mineral industries	...	...	...	...	1	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	...	...	...	1	...	...	...
Included in manufactures	...	...	...	1	2	...	...	...	...	...
Natural abrasives, except sand	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Knox	Kosciusko	Lagrange	Lake	La Porte	Lawrence	Madison	Marion	Marshall	Martin
All operations, total	33	6	2	6	7	9	11	12	8	5
Classified in mineral industries	33	6	2	4	7	6	11	12	8	4
Included in manufactures	...	...	...	2	...	3	...	...	...	1
Bituminous coal mining:										
Bituminous coal	5	...	...	...	...	...	...	...	...	1
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[2]	23	...	...	...	...	...	...	...	...	2
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	...	...	...	...	...	2	...	...	...	...
Included in manufactures	...	...	...	...	...	1	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	1
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	...	...	...	1	4	1	...	...	...
Included in manufactures	...	...	...	...	...	1	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...
Sand and gravel:										
Common sand and gravel	4	6	2	3	3	...	10	11	8	...
Foundry sand	...	...	...	...	3	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fire clay:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	1	...	...	...	...	...	...
Included in manufactures	...	...	...	1	...	1	...	...	...	1
Natural abrasives, except sand	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	1	...	...

County	Miami	Monroe	Montgomery	Morgan	Noble	Orange	Owen	Parke	Perry	Pike
All operations, total	5	18	8	8	4	5	8	10	7	55
Classified in mineral industries	5	11	6	6	4	5	8	8	5	55
Included in manufactures	...	7	2	2	...	...	...	2	2	...
Bituminous coal mining:										
Bituminous coal	...	...	...	...	...	...	3	1	1	7
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[2]	1	1	...	...	...	...	...	...	1	48
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	...	6	...	...	...	...	1	...	...	...
Included in manufactures	...	7	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	1	1	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	3	...	1	1	4	2	1	1	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	1	...
Sand and gravel:										
Common sand and gravel	4	1	5	5	3	...	1	2	1	...
Foundry sand	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fire clay:										
Classified in mineral industries	...	...	1	...	...	...	...	2	...	...
Included in manufactures	...	...	...	...	...	...	...	1	1	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	...	...	...	...	1	...	...
Included in manufactures	...	...	2	2	...	...	...	1	1	...
Natural abrasives, except sand	...	...	...	...	...	1	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Porter	Posey	Pulaski	Putnam	Randolph	Ripley	Rush	St. Joseph	Scott	Shelby
All operations, total	7	77	3	8	5	3	7	7	1	7
Classified in mineral industries	7	77	3	6	5	3	7	7	1	7
Included in manufactures	...	...	...	2	...	...	...	...	...	...
Bituminous coal mining:										
Bituminous coal	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[2]	...	74	...	...	...	...	2	...	...	2
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	...	1	5	2	3	2	...	1	2
Included in manufactures	...	...	...	1	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...
Sand and gravel:										
Common sand and gravel	5	3	1	1	3	...	3	7	...	3
Foundry sand	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fire clay:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	1	...	...	...	...	...	...	...
Included in manufactures	...	...	...	1	...	...	...	...	...	...
Natural abrasives, except sand	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...

County	Spencer	Starke	Steuben	Sullivan	Switzerland	Tippecanoe	Tipton	Union	Vanderburgh	Vermillion
All operations, total	24	3	7	29	1	4	1	1	43	10
Classified in mineral industries	23	3	7	29	1	4	1	1	41	10
Included in manufactures	1	...	...	...	...	...	...	...	2	...
Bituminous coal mining:										
Bituminous coal	1	...	...	12	...	...	...	...	...	4
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[2]	20	...	...	13	...	...	1	...	40	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension stone:										
Limestone:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	...	...	1	1	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...
Sand and gravel:										
Common sand and gravel	1	3	7	3	...	4	...	1	1	5
Foundry sand	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:										
Fire clay:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	1
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	2	...
Natural abrasives, except sand	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Vigo	Wabash	Warren	Warrick	Washington	Wayne	Wells	White	Whitley
All operations, total	24	8	3	27	2	5	5	2	4
Classified in mineral industries	23	8	3	27	2	5	5	2	4
Included in manufactures	1	...	...	...	...	...	...	...	...
Bituminous coal mining:									
Bituminous coal	12	...	...	20	...	...	...	...	...
Bituminous coal mining contract services	...	...	...	3	...	...	...	...	...
Crude petroleum and natural gas extraction:									
Crude petroleum and natural gas[2]	8	2	...	2	...	...	...	1	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:									
Dimension stone:									
Limestone:									
Classified in mineral industries	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...
Crushed and broken stone:									
Limestone:									
Classified in mineral industries	...	1	...	1	1	1	2	1	...
Included in manufactures	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...
Sand and gravel:									
Common sand and gravel	3	5	3	1	1	4	1	...	4
Foundry sand	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:									
Fire clay:									
Classified in mineral industries	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:									
Classified in mineral industries	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...
Natural abrasives, except sand	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	2	...	...

NA Not available.
[1]See table 3, footnote 3, and for county figures, table 3, footnote 6.
[2]See table 3, footnote 4.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Indiana, all mineral operations:												
Including operations classified in manufactures	815	126	327	139	110	66	25	16	5	1	...	...
Mineral industries only	776	123	313	134	105	62	24	10	5	...	...	...
Bituminous coal mining, total	101	2	20	26	12	8	19	10	4	...	...	...
Bituminous coal	98	2	17	26	12	8	19	10	4	...	...	...
Bituminous coal mining contract services	3	...	3	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	329	43	189	58	25	11	3	...	...	...	...	...
Crude petroleum and natural gas	250	41	149	32	18	8	2	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	54	...	26	19	7	2	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	25	2	14	7	...	1	1	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	385	81	118	55	73	47	3	6	1	1	...	...
Mineral industries only	346	78	104	50	68	43	2	...	1	...	...	...
Dimension stone:												
Limestone:												
Classified in mineral industries	10	...	2	...	...	7	1	...	...	...	...	...
Included in manufactures	8	...	...	...	...	...	1	6	...	1	...	...
Sandstone	4	...	1	...	2	1	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	73	1	6	13	31	22	...	...	...	...	...	...
Included in manufactures	3	...	...	...	...	3	...	...	...	...	...	...
Stone, n.e.c	2	...	1	1	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	226	71	79	29	32	13	1	...	1	...	...	...
Foundry sand	5	...	3	1	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	9	2	3	2	2	...	...	...	...	...	...	...
Included in manufactures	5	1	2	1	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	8	2	2	4	...	...	...	...	...	...	...	...
Included in manufactures	23	2	12	4	4	1	...	...	...	...	...	...
Natural abrasive stones	1	...	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	2	1	1	...	...	...	...	...	...	...	...	...
Peat	6	1	5	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Indiana, total	7,782	85,201	8,736	1.12	103	7,905	5,396	4,365	16,206	[4]	52	37	11
Bituminous coal mining, total	4,156	39,598	1,661	0.40	42	1,385	508	866	3,144	...	41	56	[5]3
Bituminous coal	4,153	39,588	1,661	0.40	42	1,385	508	866	3,144	...	41	56	3
Bituminous coal mining contract services	3	10	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	1,268	23,315	595	0.47	26	250	xxx	xxx	[6]595	[4]	[4]	88	12
Crude petroleum and Natural gas	807	19,951	590	0.73	30	249	xxx	xxx	(NA)	[4]	...	88	[5]12
Oil and gas field contract services:													
Drilling oil and gas wells	328	2,330	4	0.01	2	1	xxx	xxx	(NA)	25	25	...	[7]50
Oil and gas field contract services, n.e.c.	133	1,034	1	0.01	1	...	xxx	xxx	(NA)	100	...	...	...
Nonmetallic minerals (except fuels) mining, total	2,358	22,288	6,480	2.75	291	6,270	4,888	3,499	12,467	1	59	27	13
Limestone:													
Dimension	204	1,517	14	0.07	9	8	...	...	14	...	64	36	...
Crushed and broken	960	8,495	361	0.38	42	157	1,409	3,499	2,232	...	10	33	[5]57
Sand and gravel:													
Common sand and gravel	1,031	10,593	6,094	5.91	575	6,094	3,479	...	10,210	...	62	27	[7]11
Foundry sand	24	359	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals and Other industries	139	1,324	11	0.08	8	11	...	...	11	91	9	...	...

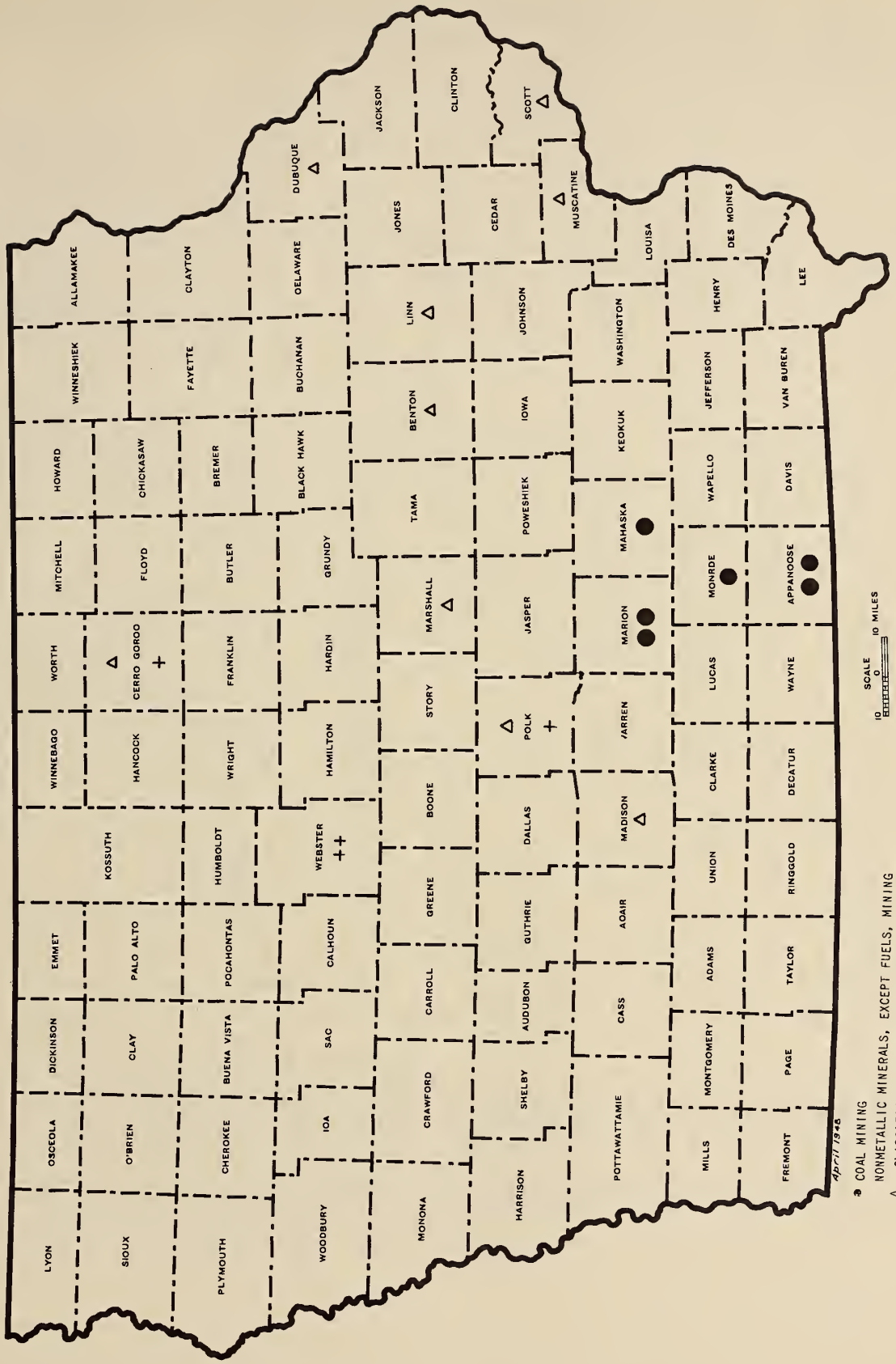
NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and Natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 230 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, table 2.
[4]Less than 0.5 percent.
[5]Includes "not specified," as follows: Bituminous coal, 1 percent; Crude petroleum and natural gas, 3 percent; Common sand and gravel, 10 percent.
[6]Represents water intake only.
[7]Represents "not specified."

IOWA

114-1

MINING IN IOWA: 1954

Rank among States:
Employment, 36
Value of shipments, 35



● COAL MINING
NONMETALLIC MINERALS, EXCEPT FUELS, MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

COAL MINING..... $5,900
NONMETALLIC MINERALS, EXCEPT FUELS, MINING. 9,100

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement establishments					
	1954	1939	1929[1]	1954	1939[2]	1929[3]	1919[3]	1909	1902[4]
Number of operating companies	314	368	(NA)	182	[5]312	(NA)	(NA)	[5]388	[5]592
Number of establishments	364	(NA)	240	208	(NA)	198	198	402	(NA)
Number of mines and quarries	367	383	247	210	316	203	230	446	629
Number of oil and gas wells producing at end of year	...	...	(NA)	...	...	(NA)	...	...	...
Number of preparation plants	263	91	(NA)	128	33	(NA)	(NA)	(NA)	(NA)
Value of shipments[6] ...$1,000	39,177	10,844	16,910	26,371	8,646	13,826	18,474	13,878	9,676
Value added in mining ...do	27,316	8,963	14,346	18,247	7,295	12,026	15,620	12,296	8,664
Number of persons engaged, total	3,314	6,271	7,812	2,307	5,570	6,992	12,034	17,471	11,051
Production and development workers	2,677	5,589	[7]7,164	1,881	5,001	6,482	11,274	16,542	[7]10,439
All other employees	297	339	[8]458	207	269	[8]339	560	478	612
Proprietors and firm members	340	343	190	219	300	171	200	451	(NA)
Performing manual labor	202	224	(NA)	135	216	(NA)	143	298	(NA)
Man-hours worked by production and development workers ...1,000	6,049	8,595	(NA)	4,059	(NA)	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total ...$1,000	22,440	7,940	12,994	15,117	6,331	11,085	16,664	13,026	8,304
Wages of production and development workers ...do	9,295	5,489	9,317	6,160	4,693	8,484	12,466	10,898	6,791
Salaries of all other employees ...do	1,210	570	[8]1,113	891	287	[8]801	1,344	546	501
Minerals received for preparation ...do	14	(NA)	(NA)	14	(NA)	(NA)	...	...	(NA)
Supplies ...do	[9]8,033	1,153	1,700	5,504	988	1,292	2,072	1,314	
Purchased fuel ...do	[9]1,847	312	314	1,265	115	181	606		963
Purchased electric energy ...do	[9]515	362	542	246	228	322	143	226	
Contract work ...do	[9]1,526	54	8	1,037	20	5	33	42	49
Purchased machinery installed ...do	[10]3,731		424	2,585		221	(NA)		
Capital expenditures, total ...do	[10]3,805	(NA)	(NA)	2,527	(NA)	(NA)	(NA)		
Development and exploration of mineral property ...do	[10]143		336	73		336	587	(NA)	(NA)
Preparation plant construction ...do	[10]330			133					
Other construction ...do	[10]87	49	(NA)	57	39	(NA)	(NA)		
New machinery and equipment ...do	[10]2,604	225		1,837	165				
Used plant and equipment ...do	[10]641	87		427	60				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total ...1,000	[10]284	66	55	188	46	34	32	24	15
Per production worker	106	12	8	100	9	5	3	1	1
Prime movers ...1,000	[10]251	31	18	169	22	9	20	24	15
Electric motors driven by purchased energy ...do	[10]33	35	37	19	24	25	12	([11])	...
Horsepower rating of electric motors driven by energy generated at establishment ...do	[10]1	5	2	...	5	2	5	2	([10])
Energy used ...million kwh equivalent	[10]682	201	758	378	174	622	(NA)		
Coal ...1,000 short tons	[10]3	20	93	1	17	78	211		
Fuel oils ...1,000 barrels	[10]177	11	1	121	9	([11])	([11])		
Gas ...million cu.ft	[10]13	18	...	1	18	...	...	(NA)	(NA)
Electric energy purchased ...million kwh	[10]118	27	31	11	21	19	(NA)		
Electric energy generated and used ...do	[10]1	4	([11])	1	3	([11])	(NA)		

NA Not available.

[1]Excludes data for common clay and shale and peat establishments. There were 20 such mines in 1939 with products valued at $271,000. See also footnote 3.

[2]All figures except number of operating companies, number of mines and quarries, and number of preparation plants include data for 1 foundry sand mine and preparation plant.

[3]Excludes data for one nonproducing establishment.

[4]Includes data for lime plants producing lime valued at $114,000.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[10]Excludes statistics for crushed stone and clay operations classified in manufactures.

[11]Less than one-half of unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION)

	Item	Iowa, total		Bituminous coal	Crushed and broken stone		Sand and gravel	Clay, ceramic, and refractory minerals, n.e.c.		All other industries (including operations classified in manufactures
		Including operations classified in manufactures	Mineral industries only		All stone (including operations classified in manufactures)	Limestone (mineral industries only)		Including operations classified in manufactures	Mineral industries only	
1	Number of operating companies	314	279	71	104	95	104	26	4	14
2	Number of establishments	364	329	73	127	118	123	26	4	15
	Number of mines, quarries, and producing oil and gas wells:									
3	1954	367	259	73	132	123	124	26	4	12
4	1939	383	(NA)	271	38	(NA)	43	20	(NA)	11
5	Number of preparation plants	263	228	...	125	116	104	24	2	10
	Value of shipments:[1]									
6	1954 .....$1,000	39,177	31,564	4,543	19,985	17,044	8,962	944	124	4,743
7	1939 .....do	10,844	(NA)	7,189	1,308	(NA)	1,385	271	(NA)	691
8	Value added in mining .....do	27,316	21,513	3,556	13,176	11,266	6,539	646	77	3,399
9	Number of persons engaged, total	3,314	2,984	709	1,500	1,363	793	89	13	223
10	Production and development workers	2,677	2,347	562	1,243	1,110	584	87	11	201
11	All other employees	297	297	40	156	156	90	...	...	11
12	Proprietors and firm members	340	340	107	101	97	119	2	2	11
13	Performing manual labor	202	202	86	47	47	65	1	1	3
	Man-hours worked by production and development workers:									
14	1954 1,000	6,049	5,288	991	3,008	2,641	1,462	177	25	411
15	1939 .....do	8,595	(NA)	6,495	765	(NA)	742	253	(NA)	340
	At mines:									
16	Underground .....do	482	482	461	21	21	...	...	...	...
17	Open-pit .....do	2,988	2,227	341	1,564	1,205	601	172	20	310
18	Surface (mine shops, yards, etc.) .....do	406	406	189	116	116	101	...	...	...
19	At preparation plants .....do	2,087	2,087	...	1,307	1,299	760	5	5	15
20	At oil and gas field operations	86	86	...	...	...	...	...	...	86
21	Man-hours spent on development and exploration work (included above) .....do	(NA)	174	10	77	77	1	...	...	86
22	Principal expenses designated below, total $1,000	22,440	19,229	2,657	12,037	10,295	5,052	561	74	2,133
23	Wages of production and development workers .....do	9,295	7,894	1,549	4,572	3,861	2,166	275	39	733
24	Salaries of all other employees .....do	1,210	1,210	173	662	662	319	...	...	56
25	Minerals received for preparation .....do	14	14	...	14	14	(NA)	(NA)	...	...
26	Supplies .....do	[2]8,033	6,223	438		4,268	1,246		16	791
	Purchased fuel:									
27	Coal .....do		20	2		...	15		...	
28	Fuel oil .....do	[2]1,847	853	112	6,789	492	236	286	1	43
29	Gas .....do		2	...		...	2		...	
30	Other fuels .....do		972	81		529	320		8	
31	Purchased electric energy .....do	[2]515	515	86		157	268		1	1
32	Contract work .....do	[2]1,526	1,526	216		312	480		9	509
33	Purchased machinery installed .....do		3,731	471		1,959	1,123		23	
34	Capital expenditures, total .....do		3,805	419		1,953	1,267		11	
35	Development and exploration of mineral property .....do		143	6		67	70		...	
36	Preparation plant construction .....do		330	...		133	197		...	
37	Other construction .....do		87	30		27	30		...	
38	New machinery and equipment .....do		2,604	324		1,360	756		11	
39	Used plant and equipment .....do		641	59		366	214		...	
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000		284	32		150	95		1	
41	Per production worker		121	57		135	163		114	
42	Prime movers 1,000	(NA)	251	26	(NA)	137	81	(NA)	1	(NA)
43	Electric motors driven by purchased energy .....do		33	6		13	14		[3]	
44	Horsepower rating of electric motors driven by energy generated at establishment .....do		1	[3]		[3]	1		...	
45	Energy used .....million kwh equivalent		682	68		307	302		2	
46	Coal .....1,000 short tons		3	1		...	2		...	
47	Fuel oil .....1,000 barrels		177	21		98	56		...	
48	Gas .....million cu.ft		13	...		1	12		...	
49	Electric energy purchased .....million kwh		118	4		7	107		...	
50	Electric energy generated and used .....do		1	...		1	...		...	
51	Water intake, including mine water used .....million gallons		4,686	...		512	4,174		...	
52	Per production worker .....do		2.00	...		0.46	7.15		...	

NA Not available. [1]See table 1, footnote 6. [2]See table 1, footnote 9. [3]See table 1, footnote 11.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Iowa, all mineral operations:									
Including operations in manufactures	364	39,177	27,316	2,677	297	6,049	9,295	1,210	[1]3,164
Mineral industries only	329	31,564	21,513	2,347	297	5,288	7,894	1,210	3,164
Bituminous coal	73	4,543	3,556	562	40	991	1,549	173	360
Crushed and broken stone (including operations in manufactures)	127	19,985	13,176	1,243	156	3,008	4,572	662	(NA)
Sand and gravel	123	8,962	6,539	584	90	1,462	2,166	319	1,053
Clay, ceramic, and refractory minerals, n.e.c. (including operations in manufactures)	26	944	646	87	...	177	275	...	(NA)
All other industries (including operations in manufactures)[2]	15	4,743	3,399	201	11	411	733	56	(NA)
COUNTY									
Appanoose (bituminous coal only)	18	637	563	185	6	273	386	18	18
Black Hawk	8	731	481	70	21	165	254	111	125
Buchanan	3	155	75	14	...	29	39	...	17
Butler	8	287	154	23	3	37	50	14	6
Crushed and broken stone	5	225	105	16	1	28	38	4	6
Carroll	4	110	71	8	1	21	25	2	6
Cerro Gordo:									
Including operations in manufactures	9	1,514	981	121	11	284	485	47	[1]42
Mineral industries only	4	400	267	44	11	117	144	47	42
Clinton	4	397	303	22	2	59	83	6	46
Dallas (including operations in manufactures)	5	157	75	15	...	30	44	...	[1]40
Davis (bituminous coal only)	3	290	148	22	2	47	67	9	...
Delaware	5	184	131	12	1	27	38	3	10
Des Moines	3	296	220	22	3	44	67	5	17
Dubuque	5	783	479	36	25	77	121	102	44
Emmet	4	133	108	7	...	19	23	...	4
Fayette	4	156	117	9	8	17	29	28	7
Floyd (including operations in manufactures)	4	195	151	18	4	45	58	15	13
Franklin	4	323	219	15	...	35	42	...	27
Greene	4	556	407	32	...	64	110	...	23
Hardin	5	725	525	36	8	104	139	24	26
Jackson	4	153	122	13	4	23	32	20	6
Jones	8	161	118	25	1	43	52	...	16
Linn	13	2,707	1,349	124	20	323	547	101	114
Madison	3	750	528	57	4	129	187	17	99
Mahaska (including operations in manufactures)	15	805	623	52	17	123	169	81	[1]8
Bituminous coal	11	535	430	35	15	72	104	71	5
Marion, total	22	2,557	2,010	205	13	422	673	56	331
Bituminous coal and lignite mining	18	2,171	1,684	184	12	363	602	53	307
Crushed and broken stone and Sand and gravel	4	386	326	21	1	59	71	3	24
Mitchell	5	249	143	18	17	51	63	69	32
Monroe (bituminous coal only)	10	392	320	73	2	126	190	7	...
Montgomery	4	691	574	43	5	92	146	15	138
Muscatine	4	903	686	57	5	148	208	40	55
Polk:									
Including operations in manufactures	18	1,866	1,130	137	17	317	586	60	[1]146
Mineral industries only	10	1,175	997	72	17	189	336	60	146
Sac	3	281	215	18	1	49	59	6	17
Scott (mineral industries only)	4	587	423	42	10	100	177	68	48
Sioux	6	810	634	36	1	104	153	2	108
Van Buren	6	501	340	59	6	113	151	29	52
Wapello (bituminous coal only)	4	196	129	25	...	46	96	...	...
Webster (mineral industries only)	5	201	161	14	4	40	58	18	20
Winneshiek	5	162	112	19	7	43	61	10	25
Worth	3	160	129	23	2	40	52	4	5

NA Not available.

[1]See table 1, footnote 10.

[2]Includes data for the Crude petroleum and natural gas extraction industries. These were not distributed by county in Iowa.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry or subindustry	Iowa, total	Adair	Adams	Allamakee	Appanoose	Benton	Black Hawk	Boone	Bremer	Buchanan	Buena Vista	Butler	Carroll	Cedar	Cerro Gordo
All operations, total	364	1	1	2	22	3	8	4	4	3	1	8	4	1	9
Classified in mineral industries	329	1	1	2	21	3	8	4	4	3	1	8	4	1	4
Included in manufactures	35	...	...	...	1	...	...	...	...	...	...	...	...	...	5
Bituminous coal mining:															
Bituminous coal	73	...	...	...	18	...	...	...	...	...	...	...	...	...	...
Bituminous coal contract services	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction[1]	3	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:															
Dimension limestone	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:															
Limestone:															
Classified in mineral industries	118	1	1	1	3	3	2	...	2	3	...	5	...	1	2
Included in manufactures	7	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Stone, n.e.c	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:															
Common sand and gravel	122	...	...	1	...	...	6	3	2	...	1	3	4	...	1
Foundry sand	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:															
Fire clay	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c:															
Classified in mineral industries	4	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Included in manufactures	22	...	...	...	1	...	...	...	...	...	...	...	...	...	3
Nonmetallic minerals (except fuels) contract services	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Miscellaneous nonmetallic minerals (except fuels):															
Gypsum (included in manufactures)	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peat	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry or subindustry	Cherokee	Chickasaw	Clarke	Clay	Clayton	Clinton	Crawford	Dallas	Davis	Decatur	Delaware	Des Moines	Dickinson	Dubuque	Emmet
All operations, total	1	1	1	2	2	4	3	5	5	3	6	3	2	5	4
Classified in mineral industries	1	1	1	2	2	4	3	3	5	3	5	3	2	5	4
Included in manufactures	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...
Bituminous coal mining:															
Bituminous coal	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...
Bituminous coal contract services	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Crude petroleum and natural gas extraction[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:															
Dimension limestone	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:															
Limestone:															
Classified in mineral industries	...	1	1	...	...	2	...	...	1	3	5	2	...	2	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Stone, n.e.c	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Sand and gravel:															
Common sand and gravel	1	...	...	2	...	2	3	3	...	...	...	1	2	2	4
Foundry sand	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:															
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:															
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):															
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry or subindustry	Fayette	Floyd	Franklin	Fremont	Greene	Grundy	Guthrie	Hamilton	Hancock	Hardin	Harrison	Henry	Howard	Humboldt	Iowa
All operations, total	4	4	5	2	4	2	1	1	1	5	2	1	5	1	1
Classified in mineral industries	4	3	4	2	4	2	1	1	1	5	2	1	5	1	1
Included in manufactures	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining:															
Bituminous coal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal contract services	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:															
Dimension limestone	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:															
Limestone:															
Classified in mineral industries	1	1	1	2	...	1	...	...	...	3	...	...	3	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:															
Common sand and gravel	3	1	2	...	4	1	1	1	1	2	2	...	2	1	1
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:															
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:															
Classified in mineral industries	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Included in manufactures	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):															
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry or subindustry	Jackson	Jasper	Jefferson	Johnson	Jones	Keokuk	Lee	Linn	Louisa	Lucas	Lyon	Madison	Mahaska	Marion	Marshall
All operations, total	5	2	1	2	8	4	3	13	2	3	1	3	15	22	3
Classified in mineral industries	4	2	1	2	8	3	3	13	2	3	1	3	14	22	3
Included in manufactures	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Bituminous coal mining:															
Bituminous coal	...	...	...	...	...	...	...	...	...	2	...	...	11	18	...
Bituminous coal contract services	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:															
Dimension limestone	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:															
Limestone:															
Classified in mineral industries	3	...	1	1	6	3	1	11	2	...	...	3	1	3	2
Included in manufactures	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:															
Common sand and gravel	1	2	...	1	2	...	2	2	...	1	1	...	2	1	1
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:															
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:															
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):															
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry or subindustry	Mitchell	Monroe	Montgomery	Muscatine	O'Brien	Osceola	Page	Palo Alto	Plymouth	Pocahontas	Polk	Pottawattamie	Sac	Scott	Sioux
All operations, total	5	12	4	4	1	2	2	2	1	2	18	1	3	5	6
Classified in mineral industries	5	12	4	4	1	2	2	2	1	2	10	1	3	4	6
Included in manufactures	...	...	...	...	...	...	...	...	...	...	8	...	...	1	...
Bituminous coal mining:															
Bituminous coal	...	10	...	...	...	...	1	...	...	...	1	...	...	...	...
Bituminous coal contract services	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:															
Dimension limestone	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:															
Limestone:															
Classified in mineral industries	2	1	4	1	...	...	1	...	...	2	...	1	...	3	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:															
Common sand and gravel	3	1	...	3	1	2	...	2	1	...	8	...	3	1	6
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:															
Fire clay	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:															
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):															
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry or subindustry	Story	Tama	Van Buren	Wapello	Warren	Washington	Wayne	Webster	Winnebago	Winneshiek	Woodbury	Worth	Wright
All operations, total	3	2	6	6	2	3	1	13	1	5	2	3	2
Classified in mineral industries	2	2	6	5	1	3	1	5	1	5	1	3	2
Included in manufactures	1	...	...	1	1	...	...	8	...	...	1	...	...
Bituminous coal mining:													
Bituminous coal	...	...	3	4	1	...	1	...	...	...	...	...	...
Bituminous coal contract services	...	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:													
Dimension limestone	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:													
Limestone:													
Classified in mineral industries	1	1	2	1	...	3	...	1	...	3	...	1	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:													
Common sand and gravel	1	1	1	...	...	...	...	4	...	2	1	...	2
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:													
Fire clay	...	...	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	1	...	...	4	...	...	1	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):													
Gypsum (included in manufactures)	...	...	...	...	...	...	...	4	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	1	...	...	2	...

NA Not available.

[1]Represents one establishment in the Crude petroleum industry and 2 establishments in the Drilling oil and gas wells contract services industry. Data for these establishments were not distributed by county.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Iowa, all mineral operations:												
Including operations classified in manufactures	364	31	132	88	79	31	3	...	...	...	...	...
Mineral industries only	329	30	115	81	77	24	2	...	...	...	...	...
Bituminous coal mining, total	74	4	28	20	18	2	2	...	...	...	...	...
Bituminous coal	73	4	28	19	18	2	2	...	...	...	...	...
Bituminous coal mining contract services	1	...	...	1	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	3	1	...	...	1	1	...	...	...	...	...	...
Crude petroleum and natural gas	1	1	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	2	...	...	...	1	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	287	26	104	68	60	28	1	...	...	...	...	...
Mineral industries only	252	25	87	61	58	21	...	...	...	...	...	...
Dimension limestone	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	118	4	35	22	41	16	...	...	...	...	...	...
Included in manufactures	7	...	1	1	...	5	...	...	...	...	...	...
Stone, n.e.c	2	...	1	1	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	122	20	47	35	15	5	...	...	...	...	...	...
Foundry sand	1	...	...	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	2	...	2	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	4	1	2	1	...	...	...	...	...	...	...	...
Included in manufactures	22	1	14	6	1	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	1	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (included in manufactures)	4	...	...	...	1	2	1	...	...	...	...	...
Peat	3	...	...	2	1	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Iowa, total	2,347	21,513	4,285	1.83	199	4,262	401	608	6,494	...	88	3	9
Bituminous coal	562	3,556	...	...	...	...	...	21	...	...	...	...	...
Crushed and broken limestone	1,110	11,266	482	0.43	43	473	30	587	561	...	99	...	[2]1
Sand and gravel	584	6,539	3,803	6.51	582	3,789	371	...	5,933	...	87	3	[2]10
Clay, ceramic, and refractory minerals, n.e.c	11	77	...	...	...	...	...	...	...	...	...	...	...
All other industries	80	75	...	...	...	...	...	...	...	...	...	...	...

[1]For computations of water use per production worker, including mine water used, see table 2.
[2]Represents "Not specified."

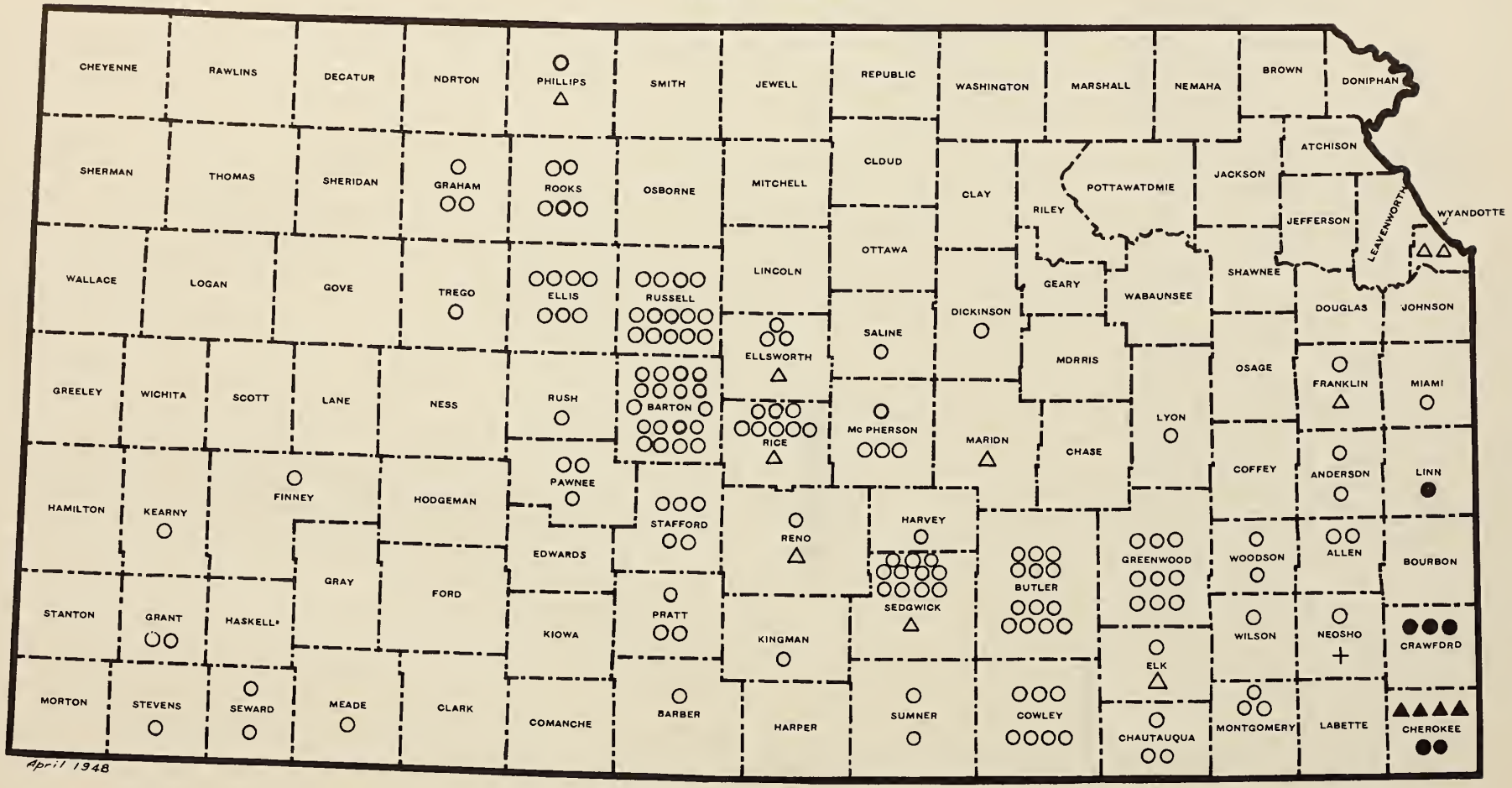
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KANSAS

115-1

MINING IN KANSAS: 1954

Rank among States:
Employment, 10
Value of shipments, 8



▲ METAL MINING
● COAL MINING
C CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

SCALE
10 0 10 20 MILES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$5,800
COAL MINING	8,600
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	22,400
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	8,600

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction and common clay & shale industries		
	1954	1939[1]	1919[1]	1909[1]	1902[2]	1954	1939	1929[3]
Number of operating companies	1,647	874	(NA)	[4]646	[4]416	248	[4]203	(NA)
Number of establishments	1,689	(NA)	827	692	(NA)	281	(NA)	261
Number of mines and quarries	288	213	241	585	393	273	205	292
Number of oil and gas wells producing at end of year	38,033	20,238	12,690	3,402	884	xxx	xxx	xxx
Number of preparation plants	212	125	(NA)	(NA)	(NA)	197	105	(NA)
Value of shipments[5]...$1,000	[6]461,400	89,081	90,338	18,723	10,700	35,766	12,326	22,464
Value added in mining...do	[6]362,804	68,518	48,394	16,005	8,924	24,941	9,360	17,263
Number of persons engaged, total	19,985	16,178	18,777	16,119	9,326	3,184	5,395	7,938
Production and development workers	15,329	13,827	16,193	14,357	[7]8,745	2,540	4,916	7,297
All other employees	2,717	1,652	1,761	687	581	405	321	[8]392
Proprietors and firm members	1,939	699	823	1,075	(NA)	239	158	249
Performing manual labor	727	237	124	576	(NA)	378	109	(NA)
Man-hours worked by production and development workers...1,000	30,708	23,240	(NA)	(NA)	(NA)	5,468	8,775	(NA)
Principal expenses designated below, total...$1,000	[6]209,138	40,688	67,300	13,057	8,006	22,004	8,151	14,693
Wages of production and development workers...do	58,130	16,241	22,022	9,650	5,697	9,407	4,556	8,465
Salaries of all other employees...do	13,853	3,384	3,334	689	533	1,908	629	[8]1,027
Minerals received for preparation...do	[6]2,914	(NA)	298	293	(NA)	1,304	(NA)	(NA)
Supplies...do	54,958	5,723	33,235	1,759		6,446	1,963	3,553
Fuel[9]...do	10,214	1,171	4,075	268	1,465	1,080	276	361
Purchased electric energy...do	4,433	1,251	273			833	685	1,073
Contract work...do	64,636	12,418	4,063	398	311	1,026	42	214
Purchased machinery installed...do	44,721		(NA)			2,456		980
Capital expenditures, total...do	83,280	(NA)	(NA)			2,320	(NA)	(NA)
Development and exploration of mineral property...do	33,292		23,722	(NA)	(NA)	91		612
Preparation plant construction...do	270	732				172	49	
Other construction...do	3,771		(NA)			120		(NA)
New machinery and equipment...do	40,884	8,572				1,398	326	
Used plant and equipment...do	5,063	1,120				539	67	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	1,255	430	136	67	23	251	75	77
Per production worker	82	31	8	5	3	99	15	11
Prime movers...1,000	1,127	349	122	66	23	207	35	30
Electric motors driven by purchased energy...do	128	81	14	1	([10])	44	40	47
Horsepower rating of electric motors driven by energy generated at establishment...do	14	18	9	2	1	1	10	1
Energy used...million kwh equivalent	11,839	3,829	(NA)			918	425	740
Coal[11]...1,000 short tons	13	20	214			10	20	72
Fuel oils[11]...1,000 barrels	369	73	695	(NA)	(NA)	151	13	9
Gas[11]...million cu.ft	30,754	10,947	8,098			582	521	302
Electric energy purchased...million kwh	536	92	(NA)			283	47	65
Electric energy generated and used...do	28	14	(NA)			2	7	1

NA Not available.
xxx Not applicable.

[1]For 1939, includes data for 4 or less machine-shop contractors with receipts for services amounting to less than $227 thousand. Such contractors were not included in the 1954 minerals census. For 1919 and 1909, excludes data for sand, gravel, common clay, and shale operations and stone quarries operated as part of cement or lime plants. There were 54 such mines in 1939 with products valued at $1,235,000.

[2]Includes data for 2 cement plants and for lime plants producing lime valued at $7,000.

[3]Excludes data for one nonproducing operation.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[6]No data were obtained for the value of gas received for processing at natural gas liquids plants or for the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]For 1954, represents purchased fuels only. For 1939, 1929, and 1909, includes the value of fuels produced and used at the same establishment for power or heat.

[10]Amounts to less than one-half of the unit of measure specified.

[11]Includes fuels produced and used for power or heat at the same establishment.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Kansas, total		Metal mining		
		Including operations classified in manufactures	Mineral industries only	All metal mining	Lead and zinc ores only: Valued chiefly for lead	Lead and zinc ores only: Valued chiefly for zinc
1	Number of operating companies	1,638	1,610	27	7	18
2	Number of establishments	1,689	1,661	32	7	22
	Number of mines, quarries, and producing oil and gas wells:					
3	1954	38,321	38,293	26	6	20
4	1939	20,451	(NA)	26	...	26
5	Number of preparation plants	209	194	6	1	5
	Value of shipments:[1]					
6	1954 ..$1,000..	461,400	456,067	3,312	524	2,743
7	1939 ..do....	89,081	(NA)	4,168	...	4,168
8	Value added in mining ..do....	[5]362,804	[5]358,699	2,206	396	1,776
9	Number of persons engaged, total	19,985	19,594	410	59	341
10	Production and development workers	15,329	14,948	349	52	290
11	All other employees	2,717	2,711	32	1	31
12	Proprietors and firm members	1,939	1,935	29	6	20
13	Performing manual labor	727	723	19	1	15
14	Man-hours worked by production and development workers:					
14	1954 ..1,000..	30,768	30,001	828	120	692
15	1939 ..do....	23,240	(NA)	2,862	...	2,862
	At mines:					
16	Underground ..do....	1,145	1,054	567	88	479
17	Open-pit ..do....	2,242	1,647	...	...	...
18	Surface (mine shops, yards, etc.) ..do....	[7]264	[7]262	138	20	102
19	At preparation plants ..do....	[7]2,581	[7]2,502	123	12	111
20	At oil and gas field operations ..do....	24,536	24,536	xxx	xxx	xxx
21	Man-hours spent on development and exploration work (included above) ..do....	9,830	9,830	39	6	33
22	Principal expenses designated below, total ..$1,000..	[5]209,138	[5]206,632	2,432	325	2,074
23	Wages of production and development workers ..do....	58,130	56,892	1,343	185	1,136
24	Salaries of all other employees ..do....	13,853	13,837	154	3	151
25	Minerals received for preparation ..do....	[5]2,914	[5]2,884	91	102	554
26	Supplies ..do....	54,958	53,788	573		
	Purchased fuel:					
27	Coal ..do....	23	23	...	...	...
28	Fuel oil ..do....	2,143	2,132	12	...	12
29	Gas ..do....	3,663	3,663	14	...	14
30	Other fuels ..do....	4,385	4,379	12	3	6
31	Purchased electric energy ..do....	4,433	4,430	209	19	190
32	Contract work ..do....	64,636	64,604	24	13	11
33	Purchased machinery installed ..do....	44,721	44,696	259	11	248
34	Capital expenditures, total ..do....	83,280	83,231	88	20	68
35	Development and exploration of mineral property ..do....	33,292	33,278	42	10	32
36	Preparation plant construction ..do....	270	268	...	...	...
37	Other construction ..do....	3,771	3,765	...	...	...
38	New machinery and equipment ..do....	40,884	40,874	46	10	36
39	Used plant and equipment ..do....	5,063	5,046	...	...	...
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total ..1,000..	1,256	1,253	18	2	16
41	Per production worker	82	84	49	38	55
42	Prime movers ..1,000..	1,127	1,125	9	1	8
43	Electric motors driven by purchased energy ..do....	129	128	9	1	8
44	Horsepower rating of electric motors driven by energy generated at establishment ..do....	14	14	...	...	...
45	Energy used ..million kwh equivalent..	11,839	11,832	32	2	29
	Produced and used for fuel:					
46	Coal ..1,000 short tons..	2	2	xxx	xxx	xxx
47	Crude petroleum ..1,000 barrels..	21	21	xxx	xxx	xxx
48	Natural gas ..million cu. ft..	9,069	9,069	xxx	xxx	xxx
	Purchased fuel:					
49	Coal ..1,000 short tons..	3	3	...	...	...
50	Fuel oil ..1,000 barrels..	518	515	2	...	2
51	Gas ..million cu.ft...	21,718	21,718	35	...	35
52	Electric energy purchased ..million kwh..	304	304	14	1	13
53	Electric energy generated and used ..do....	28	27	...	...	...
54	Water intake, including mine water used ..million gallons..	14,942	14,942	424	25	399
55	Per production worker ..do....	0.97	1.00	1.21	0.48	1.38

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Bituminous coal	Crude petroleum and natural gas extraction						
	Total	Crude petroleum	Natural gas	Drilling oil and gas wells contract services	Oil and gas field contract services, n.e.c.	Natural gas liquids and Building, repairing, and dismantling rigs and derricks	
32	1,377	818	47	277	226	16	1
34	1,393	824	47	278	226	18	2
34	38,033	33,994	3,284	750	5	...	3
93	20,238	(NA)	(NA)	(NA)	(NA)	(NA)	4
4	14	...	...	...	...	14	5
6,679	424,461	315,502	33,450	51,939	15,350	8,220	6
5,058	76,710	[2]63,019	([2])	9,810	[3]1,741	[3]2,140	7
4,271	[5]337,058	255,830	29,287	34,353	11,932	(NA)	8
535	16,714	9,678	601	4,005	2,064	366	9
423	12,706	6,932	442	3,349	1,672	311	10
74	2,308	1,731	133	301	95	48	11
38	1,700	1,015	26	355	297	7	12
33	588	293	13	158	119	5	13
721	25,120	13,485	889	6,665	3,466	615	14
3,664	14,471	[2]10,424	([2])	2,677	[3]930	[3]440	15
53	xxx	...	...	...	...	...	16
429	xxx	...	...	...	...	...	17
239	xxx	...	...	...	...	...	18
}	584	xxx	xxx	xxx	...	584	19
xxx	24,536	13,485	889	6,665	3,466	31	20
...	9,758	2,746	260	6,193	534	25	21
4,771	[5]186,445	126,250	13,169	32,980	9,702	4,344	22
1,770	48,440	26,172	1,957	13,091	5,813	1,407	23
535	11,922	9,027	679	1,511	412	293	24
1,975	[5]49,895	xxx	xxx	...	xxx	(NA)	25
		29,160	3,226	13,072	2,091	736	26
...	23	8	...	15	...	...	27
79	1,638	659	20	883	76	...	28
...	3,499	3,180	164	50	8	97	29
30	3,901	1,899	83	1,095	803	21	30
224	3,577	3,314	157	21	8	77	31
158	63,550	52,831	6,883	3,242	491	103	32
256	42,262	32,526	2,123	6,201	1,021	391	33
314	80,942	63,905	8,493	6,993	1,080	471	34
...	33,201	26,703	5,751	747	...	...	35
90	83	xxx	xxx	xxx	xxx	83	36
87	3,651	3,088	384	137	42	...	37
74	39,483	31,600	2,260	4,726	766	131	38
63	4,524	2,514	98	1,383	272	257	39
49	1,003	597	36	188	128	54	40
116	79	86	81	56	77	174	41
38	920	521	31	187	128	53	42
11	83	76	5	1	...	1	43
...	13	1	...	5	...	7	44
67	10,889	8,164	310	726	258	1,431	45
2	xxx	xxx	xxx	xxx	xxx	xxx	46
xxx	21	21	...	...	...	...	47
xxx	9,069	4,401	90	33	...	[11]4,545	48
...	3	1	...	2	...	...	49
18	364	176	4	170	14	...	50
...	20,813	18,736	793	441	110	733	51
13	252	233	11	1	([10])	7	52
...	26	4	...	1	...	21	53
293	8,358	7,515	20	333	8	482	54
0.69	0.66	1.08	0.05	0.10	([12])	1.55	55

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GF .

(For explanation of line captions and for statement on the minimum

	Item	Nonmetallic minerals (except fuels) mining		
		Total		Dimension stone
		Including operations classified in manufactures	Mineral industries only	Limestone (including operations classified in manufactures)
1	Number of operating companies	204	176	8
2	Number of establishments	230	202	8
	Number of mines, quarries, and producing oil and gas wells:			
3	1954	228	200	8
4	1939	94	(NA)	7
5	Number of preparation plants	185	170	4
	Value of shipments:[1]			
6	1954.....$1,000..	26,948	21,615	455
7	1939.....do....	3,145	(NA)	78
8	Value added in mining.....do....	19,269	15,164	329
9	Number of persons engaged, total	2,[illegible]6	1,935	69
10	Production and development workers	1,851	1,470	54
11	All other employees	303	297	6
12	Proprietors and firm members	172	168	9
13	Performing manual labor	87	83	7
	Man-hours worked by production and development workers:			
14	1954.....1,000..	[illegible],099	3,332	122
15	1939.....do....	[illegible],243	(NA)	113
	At mines:			
16	Underground.....do....	525	434	5
17	Open-pit.....do....	1,813	1,218	26
18	Surface (mine shops, yards, etc.)....do....	126	124	2
19	At preparation plants.....do....	1,635	1,556	89
20	At oil and gas field operations.....do....	xxx	xxx	xxx
21	Man-hours spent on development and exploration work (included above).....do....	33	33	...
22	Principal expenses designated below, total.....$1,000..	15,490	12,984	339
23	Wages of production and development workers.....do....	6,577	5,339	173
24	Salaries of all other employees.....do....	1,242	1,226	16
25	Minerals received for preparation.....do....	[8]5,338	...	87
26	Supplies.....do....		4,138	
	Purchased fuel:			
27	Coal.....do....	...	...	...
28	Fuel oil.....do....	[8]414	403	11
29	Gas.....do....	[8]150	150	...
30	Other fuels.....do....	[8]442	436	7
31	Purchased electric energy.....do....	[8]423	420	3
32	Contract work.....do....	[8]904	872	42
33	Purchased machinery installed.....do....	[9]1,944	1,919	30
34	Capital expenditures, total.....do....	[9]1,936	1,887	54
35	Development and exploration of mineral property.....do....	[9]49	35	14
36	Preparation plant construction.....do....	[9]97	95	2
37	Other construction.....do....	[9]33	27	6
38	New machinery and equipment.....do....	[9]1,281	1,271	15
39	Used plant and equipment.....do....	[9]476	459	17
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000..	[9]186	183	5
41	Per production worker	100	124	89
42	Prime movers.....1,000..	[9]160	158	4
43	Electric motors driven by purchased energy.....do....	[9]26	25	1
44	Horsepower rating of electric motors driven by energy generated at establishment.....do....	[9]1	1	([10])
45	Energy used.....million kwh equivalent..	[9]851	844	7
	Produced and used for fuel:			
46	Coal.....1,000 short tons..	xxx	xxx	xxx
47	Crude petroleum.....1,000 barrels..	xxx	xxx	xxx
48	Natural gas.....million cu. ft..	xxx	xxx	xxx
	Purchased fuel:			
49	Coal.....1,000 short tons..	...	...	...
50	Fuel oil.....1,000 barrels..	[9]134	131	3
51	Gas.....million cu.ft...	[9]870	870	...
52	Electric energy purchased.....million kwh..	[9]25	25	([10])
53	Electric energy generated and used.....do....	[9]2	1	1
54	Water intake, including mine water used.....million gallons..	[9]5,867	5,867	...
55	Per production worker.....do....	3.17	3.99	...

NA Not available. [1]See table 1, footnote 5. [2]Figures for the Natural gas industry are included with those for the Crude petroleum industry. The man-hour figure includes data for 2 nonproducing operations in industries other than Crude petroleum and natural gas extraction. [3]Figures for all other contract services are included with those for Oil and gas field contract services, n.e.c. [4]Data for one Crushed and broken sandstone quarry are included with data for other industries. [5]See table 1, footnote 6. [6]Includes man-hours worked on floating equipment. [7]Combined figures for man-hours at surface and preparation plant for the Bituminous coal industry are included with those for preparation plant since 85 percent of all marketable coal shipped in Kansas was cleaned.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939--Continued
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued							
Dimension stone—Continued	Crushed and broken stone			Sand and gravel	Clay, ceramic, and refractory minerals n.e.c. (including operations classified in manufactures)	Other industries (including operations classified in manufactures)	
	Limestone		Sandstone and Stone, n.e.c.				
Sandstone and Stone, n.e.c.	Included in manufactures	Mineral industries only					
4	56	49	3	108	15	10	1
4	75	68	3	115	15	10	2
4	75	68	1	115	15	10	3
...	27	(NA)	1	38	8	13	4
...	70	63	3	100	1	7	5
44	12,492	9,492	619	7,313	1,173	4,852	6
...	1,060	(NA)	(4)	722	68	[3] [4]1,217	7
29	8,422	6,197	321	5,529	805	3,834	8
13	1,015	797	36	789	87	317	9
10	845	627	28	547	83	284	10
...	134	134	8	121	4	30	11
3	36	36	...	121	...	3	12
1	14	14	...	63	...	2	13
19	1,831	1,406	79	1,294	180	574	14
...	913	(NA)	(4)	436	49	[3,4]732	15
...	255	255	...	...	...	265	16
13	914	489	24	[6]664	147	25	17
6	82	82	24	(NA)	...	12	18
...	580	580	31	630	33	272	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
...	3	3	...	30	...	...	21
42	7,597	6,111	434	4,229	689	2,160	22
26	2,982	2,271	107	2,018	283	988	23
...	606	606	23	439	23	135	24
...	...	...	...	(NA)	...	...	25
8	2,908	2,133	174	1,054			26
...	...	...	...	...			27
2	210	210	16	163			28
...	7	7	...	8			29
6	180	180	15	232			30
...	174	174	21	146			31
...	530	530	78	169	383	1,037	32
...	930	930	25	644			33
1	869	869	31	632			34
...	5	5	...	30			35
...	21	21	...	56			36
...	2	2	6	3			37
...	471	471	25	469			38
1	370	370	...	74			39
1	93	93	3	77			40
100	110	148	107	141			41
1	82	82	2	70			42
...	11	11	1	7			43
...	1	1	...	...			44
2	139	139	12	209	(NA)	(NA)	45
xxx	xxx	xxx	xxx	xxx			46
xxx	xxx	xxx	xxx	xxx			47
xxx	xxx	xxx	xxx	xxx			48
...	...	...	...	...			49
1	43	43	4	78			50
...	33	33	...	41			51
...	10	10	1	8			52
...	1	1	...	...			53
...	287	287	241	4,603			54
...	0.34	0.46	8.61	8.41			55

[8]Figures for fuels, electric energy, and contract work for crushed stone, clay, and gypsum operations classified in manufactures are included with the figurea for suppliea. [9]Excludes statistics for crushed stone, clay, and gypsum operations classified in manufactures. [10]Less than one-half of the unit of measure specified. [11]Includes residue gas from natural gasoline plants. [12]Less than 0.005.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Kansas, all mineral operations: Including operations in manufactures	1,689	461,400	362,804	15,329	2,717	30,768	58,130	13,853	[2]78,217
Mineral industries only	1,661	456,067	358,699	14,948	2,711	30,001	56,892	13,837	78,185
Metal mining, total	32	3,312	2,206	349	32	828	1,343	154	88
Lead and zinc ores	29	3,267	2,172	342	32	812	1,321	154	88
Metal mining contract services	3	45	34	7	...	16	22	...	...
Bituminous coal	34	6,679	4,271	423	74	721	1,770	535	251
Crude petroleum and natural gas extraction, total	1,393	421,461	[3]337,058	12,706	2,308	25,120	48,440	11,922	76,418
Crude petroleum and natural gas[4]	871	348,952	285,117	7,374	1,864	14,374	28,129	9,706	69,786
Natural gas liquids and Building, repairing, and dismantling rigs and derricks services[5]	18	8,220	([3])	311	48	615	1,407	293	214
Oil and gas field contract services, except Building, repairing, and dismantling rigs and derricks[5]	504	67,289	46,285	5,021	396	10,131	18,904	1,923	6,418
Nonmetallic minerals (except fuels) mining, total: Including operations in manufactures	230	26,948	19,269	1,851	303	4,099	6,577	1,242	[2]1,460
Mineral industries only	202	21,615	15,164	1,470	297	3,332	5,339	1,226	1,428
Dimension stone: Including operations in manufactures	12	499	358	64	6	141	199	16	37
Mineral industries only	8	101	67	18	...	34	32	...	5
Crushed and broken stone: Including operations in manufactures	78	13,111	8,743	873	142	1,910	3,089	629	[2]530
Mineral industries only	71	10,111	6,518	655	142	1,485	2,378	629	530
Sand and gravel	115	7,313	5,529	547	121	1,294	2,018	439	558
Clay, ceramic, and refractory minerals (including operations in manufactures)	15	1,173	805	83	4	180	283	23	18
Chemical and fertilizer mineral mining, Nonmetallic minerals (except fuels) contract services, and Miscellaneous nonmetallic minerals (except fuels) (including operations in manufactures)	10	4,852	3,834	284	30	574	988	135	317
COUNTY									
Allen (mineral industries only—crude petroleum and natural gas)	36	(NA)	(NA)	[6]152	([6])	(NA)	(NA)	(NA)	(NA)
Anderson, total	19	(NA)	(NA)	[6]156	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	16	(NA)	(NA)	[6]108	([6])	(NA)	(NA)	(NA)	(NA)
Crushed and broken stone	3	486	318	44	4	99	128	26	122
Barber (mineral industries only)	31	(NA)	(NA)	[6]103	([6])	(NA)	(NA)	(NA)	(NA)
Barton (mineral industries only), total	158	(NA)	(NA)	[6]1,200	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	152	(NA)	(NA)	[6]1,177	([6])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	6	190	178	23	...	50	83	...	23
Bourbon (mineral industries only), total	16	(NA)	(NA)	[6]40	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	9	(NA)	(NA)	[6]11	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal and Nonmetallic minerals (except fuels) mining	7	290	181	[6]29	([6])	65	[6]87	([6])	13
Butler, total	107	(NA)	(NA)	[6]892	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	103	(NA)	(NA)	[6]857	([6])	(NA)	(NA)	(NA)	(NA)
Crushed and broken stone	4	228	137	[6]35	([6])	66	[6]106	([6])	32
Chautauqua	64	(NA)	(NA)	[6]223	([6])	(NA)	(NA)	(NA)	(NA)
Cherokee (mineral industries only), total	42	6,139	4,325	527	85	1,174	2,208	468	294
Metal mining	32	3,312	2,209	349	32	828	1,343	154	88
Lead and zinc ores	29	3,267	2,175	342	32	812	1,321	154	88
Bituminous coal	7	2,540	1,979	165	49	318	829	309	201
Nonmetallic minerals (except fuels) mining	3	287	137	13	4	28	36	5	5
Clark	4	(NA)	(NA)	[6]15	([6])	(NA)	(NA)	(NA)	(NA)
Clay	3	250	139	[6]20	([6])	28	[6]57	([6])	25

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Coffey	20	(NA)	(NA)	[6]47	([6])	(NA)	(NA)	(NA)	(NA)
Cowley (mineral industries only), total	94	(NA)	(NA)	[6]455	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	87	(NA)	(NA)	[6]417	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	7	244	146	35	3	81	128	12	30
Crawford (mineral industries only), total	24	(NA)	(NA)	[6]204	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	12	2,562	1,978	160	19	255	638	188	26
Crude petroleum and natural gas and Crushed and broken stone (Mineral industries only)	12	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)
Decatur	5	(NA)	(NA)	[6]10	([6])	(NA)	(NA)	(NA)	(NA)
Dickinson, total	12	(NA)	(NA)	[6]58	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	7	(NA)	(NA)	[6]39	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	5	191	95	15	4	34	51	10	21
Doniphan	5	243	135	18	3	41	50	7	2
Edwards	8	(NA)	(NA)	[6]11	([6])	(NA)	(NA)	(NA)	(NA)
Elk	26	(NA)	(NA)	[6]98	([6])	(NA)	(NA)	(NA)	(NA)
Ellis	105	(NA)	(NA)	[6]471	([6])	(NA)	(NA)	(NA)	(NA)
Ellsworth	52	(NA)	(NA)	[6]274	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	49	(NA)	(NA)	[6]188	([6])	(NA)	(NA)	(NA)	(NA)
Finney	16	(NA)	(NA)	[6]83	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	13	(NA)	(NA)	[6]55	([6])	(NA)	(NA)	(NA)	(NA)
Ford	4	(NA)	(NA)	[6]21	([6])	(NA)	(NA)	(NA)	(NA)
Franklin:									
Including crude petroleum and natural gas	17	(NA)	(NA)	[6]95	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	6	824	428	46	9	120	185	42	24
Geary (including operations in manufactures)	4	341	225	33	3	76	118	10	16
Graham	48	(NA)	(NA)	[6]179	([6])	(NA)	(NA)	(NA)	(NA)
Grant, total	11	(NA)	(NA)	[6]156	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	8	(NA)	(NA)	[6]47	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	3	3,489	3,145	84	25	167	416	147	57
Greenwood	102	(NA)	(NA)	[6]626	([6])	(NA)	(NA)	(NA)	(NA)
Harper	14	(NA)	(NA)	[6]24	([6])	(NA)	(NA)	(NA)	(NA)
Harvey	25	(NA)	(NA)	[6]53	([6])	(NA)	(NA)	(NA)	(NA)
Haskell	7	(NA)	(NA)	[6]11	([6])	(NA)	(NA)	(NA)	(NA)
Kearney	11	(NA)	(NA)	[6]39	([6])	(NA)	(NA)	(NA)	(NA)
Kingman	25	(NA)	(NA)	[6]83	([6])	(NA)	(NA)	(NA)	(NA)
Labette	8	(NA)	(NA)	[6]26	([6])	(NA)	(NA)	(NA)	(NA)
Linn, total	12	(NA)	(NA)	[6]79	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	3	1,420	1,094	55	5	100	246	36	29
Crude petroleum and natural gas and Crushed and broken stone	9	(NA)	(NA)	[6]19	([6])	(NA)	(NA)	(NA)	(NA)
Lyon	9	(NA)	(NA)	[6]80	([6])	(NA)	(NA)	(NA)	(NA)
McPherson	88	(NA)	(NA)	[6]255	([6])	(NA)	(NA)	(NA)	(NA)
Marion	36	(NA)	(NA)	[6]122	([6])	(NA)	(NA)	(NA)	(NA)
Meade	9	(NA)	(NA)	[6]45	([6])	(NA)	(NA)	(NA)	(NA)
Miami	30	(NA)	(NA)	[6]106	([6])	(NA)	(NA)	(NA)	(NA)
Montgomery (mineral industries only)	58	(NA)	(NA)	[6]175	([6])	(NA)	(NA)	(NA)	(NA)
Morris	9	(NA)	(NA)	[6]13	([6])	(NA)	(NA)	(NA)	(NA)
Neosho	33	(NA)	(NA)	[6]105	([6])	(NA)	(NA)	(NA)	(NA)
Norton	8	(NA)	(NA)	[6]31	([6])	(NA)	(NA)	(NA)	(NA)
Osage	7	407	311	55	5	100	147	22	17
Pawnee	34	(NA)	(NA)	[6]190	([6])	(NA)	(NA)	(NA)	(NA)
Phillips	23	(NA)	(NA)	[6]174	([6])	(NA)	(NA)	(NA)	(NA)
Pratt	36	(NA)	(NA)	[6]176	([6])	(NA)	(NA)	(NA)	(NA)
Reno, total	48	(NA)	(NA)	[6]196	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	41	(NA)	(NA)	[6]97	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	7	1,528	1,296	91	8	190	349	40	52

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Rice, total	118	(NA)	(NA)	[6]692	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	112	(NA)	(NA)	[6]548	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	6	(D)	(D)	131	13	(D)	(D)	(D)	(D)
Rooks	75	(NA)	(NA)	[6]316	([6])	(NA)	(NA)	(NA)	(NA)
Rush	27	(NA)	(NA)	[6]51	([6])	(NA)	(NA)	(NA)	(NA)
Russell	113	(NA)	(NA)	[6]917	([6])	(NA)	(NA)	(NA)	(NA)
Saline	35	(NA)	(NA)	[6]74	([6])	(NA)	(NA)	(NA)	(NA)
Sedgwick, total	91	(NA)	(NA)	[6]907	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	73	(NA)	(NA)	[6]784	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	18	2,644	2,154	108	15	228	412	65	191
Seward	17	(NA)	(NA)	[6]111	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	14	(NA)	(NA)	[6]39	([6])	(NA)	(NA)	(NA)	(NA)
Shawnee	7	740	461	42	6	93	189	33	56
Sheridan	5	(NA)	(NA)	[6]26	([6])	(NA)	(NA)	(NA)	(NA)
Stafford	98	(NA)	(NA)	[6]338	([6])	(NA)	(NA)	(NA)	(NA)
Stevens	8	(NA)	(NA)	[6]53	([6])	(NA)	(NA)	(NA)	(NA)
Sumner	41	(NA)	(NA)	[6]118	([6])	(NA)	(NA)	(NA)	(NA)
Trego	22	(NA)	(NA)	[6]54	([6])	(NA)	(NA)	(NA)	(NA)
Wabaunsee	4	(NA)	(NA)	[6]29	([6])	(NA)	(NA)	(NA)	(NA)
Wilson (mineral industries only)	33	(NA)	(NA)	[6]82	([6])	(NA)	(NA)	(NA)	(NA)
Woodson	46	(NA)	(NA)	[6]104	([6])	(NA)	(NA)	(NA)	(NA)
Wyandotte, total	17	3,291	2,465	173	40	451	901	254	107
Dimension stone and Crushed and broken stone	7	1,575	1,206	96	15	241	474	145	60
Sand and gravel	10	1,716	1,259	77	18	210	427	74	47

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 5.
[2]See table 2, footnote 9.
[3]See table 1, footnote 6.
[4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for such companies is included with the county data for the Crude petroleum and Natural gas industries.
[6]Figures for "All other employees" are included with those for "Production and development workers."
[7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry or subindustry	Kansas, total	Allen	Anderson	Atchinson	Barber	Barton	Bourbon	Brown	Butler	Chase	Chautauqua	Cherokee
All operations, total	1,689	41	19	3	32	159	17	1	107	5	64	43
Classified in mineral industries	1,661	36	19	3	31	158	16	1	107	5	64	42
Included in manufactures	28	5	...	...	1	1	1	...	...	...	...	1
Metal mining:												
Lead and zinc ores:												
Valued chiefly for lead	7	...	...	...	...	...	...	...	...	...	...	7
Valued chiefly for zinc	22	...	...	...	...	...	...	...	...	...	...	22
Metal mining contract services	3	...	...	...	...	...	...	...	...	...	...	3
Bituminous coal	34	...	...	...	..	...	3	...	...	...	...	7
Crude petroleum and natural gas extraction:												
Crude petroleum and Natural gas[1]	871	36	16	...	29	152	9	1	103	5	63	...
Natural gas liquids	14	...	...	...	1	...	...	...	...	...	...	...
Oil and gas field contract services[2]	508	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	4	...	...	...	...	...	...	...	...	...	...	1
Included in manufactures	4	...	...	...	...	...	...	...	...	...	...	...
Sandstone	1	...	...	...	...	...	1	...	...	...	...	...
Stone, n.e.c	3	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	68	...	3	3	...	...	3	...	4	...	1	...
Included in manufactures	7	2	...	...	...	...	1	...	...	...	...	...
Sandstone	1	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	2	...	...	...	...	...	...	...	...	...	...	2
Sand and gravel:												
Common sand and gravel	111	...	...	...	1	6	...	1	...	...	...	...
Glass sand	3	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	1	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	1	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	1	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	14	3	...	...	...	1	...	...	...	...	...	1
Rock salt	3	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining	1	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (included in manufactures)	2	...	...	...	1	...	...	...	...	...	...	...
Pumice and pumicite	3	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry or subindustry	Cheyenne	Clark	Clay	Cloud	Coffey	Cowley	Crawford	Decatur	Dickinson	Doniphan	Douglas	Edwards
All operations, total	1	4	3	4	20	95	25	5	12	5	2	8
Classified in mineral industries	1	4	3	3	20	94	24	5	12	5	2	8
Included in manufactures	...	...	...	1	...	1	1	...	...	...	...	...
Metal mining:												
Lead and zinc ores:												
Valued chiefly for lead	...	...	...	...	...	...	...	...	...	...	...	...
Valued chiefly for zinc	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	...	2	...	12	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and Natural gas[1]	...	4	...	...	17	87	10	5	7	...	...	6
Natural gas liquids	...	...	...	...	...	1	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	1	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	1	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	1	...	2	...	3	5	1	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	1	...	3	3	...	5	...	...	2	...	1	1
Glass sand	...	...	...	...	...	...	...	...	...	...	...	1
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	...	...	...	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	1	...	...	...	...	...
Rock salt	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry or subindustry	Elk	Ellis	Ells-worth	Finney	Ford	rank-lin	Geary	Gove	Graham	Grant	Gray	Green-wood
All operations, total	26	105	52	16	4	17	4	3	48	11	2	102
Classified in mineral industries	26	105	52	16	4	17	2	3	48	11	2	102
Included in manufactures	...	...	...	...	...	...	2	...	...	...	...	...
Metal mining:												
Lead and zinc ores:												
Valued chiefly for lead	...	...	...	...	...	...	...	...	...	...	...	...
Valued chiefly for zinc	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	...	...	1	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and Natural gas[1]	25	103	49	13	1	11	...	3	48	8	1	102
Natural gas liquids	...	...	...	1	...	...	...	...	...	3	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	2	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	1	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	1	...	...	...	...	3	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	...	...	2	2	3	1	2	...	...	...	1	...
Glass sand	...	1	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	1	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Rock salt	...	...	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry or subindustry	Hamil-ton	Harper	Harvey	Haskell	Hodge-man	Jack-son	Jef-ferson	John-son	Kearney	Kingman	Kiowa	Labette
All operations, total	2	14	25	7	3	1	2	7	11	25	1	8
Classified in mineral industries	2	14	25	7	3	1	2	7	11	25	1	8
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining:												
Lead and zinc ores:												
Valued chiefly for lead	...	...	...	...	...	...	...	...	...	...	...	...
Valued chiefly for zinc	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	...	...	...	...	...	...	...	...	1
Crude petroleum and natural gas extraction:												
Crude petroleum and Natural gas[1]	1	14	24	5	3	...	...	...	9	23	1	5
Natural gas liquids	...	...	...	...	...	...	...	...	2	1	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	1	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	1	2	6	...	...	...	2
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	1	...	1	2	...	...	...	...	...	1	...	...
Glass sand	...	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Rock salt	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry or subindustry	Lane	Leavenworth	Lincoln	Linn	Lyon	McPherson	Marion	Marshall	Meade	Miami	Montgomery	Morris
All operations, total	1	3	2	12	9	88	36	4	10	30	63	9
Classified in mineral industries	1	3	2	12	9	88	36	4	9	30	58	9
Included in manufactures	...	...	...	...	...	...	...	...	1	...	5	...
Metal mining:												
Lead and zinc ores:												
Valued chiefly for lead	...	...	...	...	...	...	...	...	...	...	...	...
Valued chiefly for zinc	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	3	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and Natural gas[1]	1	...	...	7	8	86	35	1	7	29	56	5
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactues	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	...	2	...	2	...	...	1	...	...	1	2	3
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1	...
Sandstone	...	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	...	1	...	...	1	2	...	3	1	...	...	1
Glass sand	...	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	4	...
Rock salt	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	1	...	...	...
Pumice and pumicite	...	...	1	...	...	...	...	...	1	...	...	...

Industry group and industry or subindustry	Morton	Nemaha	Neosho	Ness	Norton	Osage	Osborne	Ottawa	Pawnee	Phillips	Pottawatomie	Pratt
All operations, total	2	1	35	8	8	7	4	1	34	23	2	36
Classified in mineral industries	2	1	33	8	8	7	4	1	34	23	2	36
Included in manufactures	...	...	2	...	...	...	...	...	...	...	...	...
Metal mining:												
Lead and zinc ores:												
Valued chiefly for lead	...	...	...	...	...	...	...	...	...	...	...	...
Valued chiefly for zinc	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	...	...	5	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and Natural gas[1]	2	1	31	7	7	...	4	1	32	21	...	33
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	...	...	2	...	...	2	...	...	...	1	...	...
Included in manufactures	...	...	1	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	...	...	...	1	...	...	...	...	2	1	2	3
Glass sand	...	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	1	...	...	...	...	...	...	...	...	...
Rock salt	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	1	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry or subindustry	Rawlins	Reno	Rice	Riley	Rooks	Rush	Russell	Saline	Scott	Sedgwick	Seward	Shawnee	Sheridan
All operations, total	1	48	118	2	75	27	113	35	2	91	17	7	5
Classified in mineral industries	1	48	118	1	75	27	113	35	2	91	17	7	5
Included in manufactures	...	...	...	1	...	...	...	...	...	...	...	...	...
Metal mining:													
Lead and zinc ores:													
Valued chiefly for lead	...	...	...	...	...	...	...	...	...	...	...	...	...
Valued chiefly for zinc	...	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:													
Crude petroleum and Natural gas[1]	...	41	112	1	75	26	113	33	1	73	14	...	4
Natural gas liquids	...	1	...	...	...	1	...	...	...	1	2	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:													
Dimension stone:													
Limestone:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	1	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	1	...
Crushed and broken stone:													
Limestone:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	1	...	3	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:													
Common sand and gravel	1	5	5	...	...	...	...	2	1	16	1	3	1
Glass sand	...	...	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:													
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Rock salt	...	1	1	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):													
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry or subindustry	Sherman	Stafford	Stanton	Stevens	Sumner	Thomas	Trego	Wabaunsee	Washington	Wichita	Wilson	Woodson	Wyandotte
All operations, total	3	98	3	8	41	3	22	4	2	1	37	46	18
Classified in mineral industries	3	98	3	8	41	3	22	4	2	1	33	46	17
Included in manufactures	...	...	...	...	...	...	...	...	...	...	4	...	1
Metal mining:													
Lead and zinc ores:													
Valued chiefly for lead	...	...	...	...	...	...	...	...	...	...	...	...	...
Valued chiefly for zinc	...	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:													
Crude petroleum and Natural gas[1]	...	97	3	8	40	1	21	3	...	1	31	46	...
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:													
Dimension stone:													
Limestone:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	2
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:													
Limestone:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	2	...	5
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1	...	1
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:													
Common sand and gravel	2	1	....	...	1	2	1	1	2	...	...	...	8
Glass sand	...	...	...	...	...	...	...	...	...	...	...	...	1
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...	1
Clay, ceramic, and refractory minerals:													
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	3	...	...
Rock salt	...	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining	1	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):													
Gypsum (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumite	...	...	...	...	...	...	...	...	...	...	...	...	...

NA Not available. [1]See table 3, footnote 4, and for county figures, footnote 7. [2]See table 3, footnote 5.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Kansas, all mineral operations:												
Including operations classified in manufactures	1,689	148	789	305	226	165	33	21	1	1	...	...
Mineral industries only	1,661	147	780	300	218	160	33	21	1	1	...	...
Metal mining, total	32	5	11	5	5	5	...	1	...	...	...	...
Lead and zinc ores:												
Ores valued chiefly for lead	7	...	3	3	...	1	...	...	...	...	...	...
Ores valued chiefly for zinc	22	5	5	2	5	4	...	1	...	...	...	...
Metal mining contract services	3	...	3	...	...	...	...	...	...	...	...	...
Bituminous coal	34	4	13	7	5	1	3	1	...	...	...	...
Crude petroleum and natural gas extraction, total	1,393	116	673	241	179	137	27	18	1	1	...	...
Crude petroleum and Natural gas	871	106	478	114	74	66	16	15	1	1	...	...
Natural gas liquids	14	...	...	1	6	6	1	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	278	3	85	69	66	43	9	3	...	...	...	...
Building, repairing, and dismantling rigs and derricks	4	...	3	1	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	226	7	107	56	33	22	1	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	230	23	92	52	37	22	3	1	...	...	...	...
Mineral industries only	202	22	83	47	29	17	3	1	...	...	...	...
Dimension stone:												
Limestone:												
Classified in mineral industries	4	3	...	1	...	...	...	...	...	...	...	...
Included in manufactures	4	...	...	1	2	1	...	...	...	...	...	...
Sandstone	1	...	...	1	...	...	...	...	...	...	...	...
Stone, n.e.c	3	...	3	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	68	3	27	12	13	12	1	...	...	...	...	...
Included in manufactures	7	...	...	...	4	3	...	...	...	...	...	...
Sandstone	1	...	...	...	...	1	...	...	...	...	...	...
Stone, n.e.c	2	...	2	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	111	13	47	33	16	1	1	...	...	...	...	...
Glass sand	3	2	...	...	...	1	...	...	...	...	...	...
Foundry sand	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	1	...	...	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	1	...	...	...	...	1	...	...	...	...	...	...
Included in manufactures	14	1	9	3	1	...	...	...	...	...	...	...
Rock salt	3	...	...	...	...	1	1	1	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	1	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (classified in manufactures)	2	...	...	...	1	1	...	...	...	...	...	...
Pumice and pumicite	3	1	2	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Water intake (except mine water): Million gallons per production worker[3]	Water intake (except mine water): Gallons per dollar value added	Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons): Used	Mine water (mil. gallons): Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water)[2] by principal source: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Kansas, total	14,948	358,699	13,858	0.93	39	15,886	1,084	666	36,374	5	39	33	23
Metal mining, total	349	2,206	160	0.46	73	138	264	421	661	...	31	46	23
Lead and zinc ores:													
Ores valued chiefly for lead	52	396	25	0.48	63	25	...	31	25	...	...	...	[4]100
Ores valued chiefly for zinc	290	1,776	135	0.47	76	113	264	390	636	...	37	54	9
Metal mining contract services:	7	34	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	423	4,271	182	0.43	43	168	111	241	1,239	...	72	22	[4]6
Crude petroleum and natural gas extraction, total	12,706	[5]337,058	8,358	0.66	25	10,607	xxx	xxx	[6]25,143	8	40	26	26
Crude petroleum and natural gas	7,374	285,117	7,535	1.02	26	10,416	xxx	xxx	(NA)	8	43	22	[7]27
Natural gas liquids and Building, repairing, and dismantling rigs and derricks contract services.	311	([5])	482	1.55	(NA)	189	xxx	xxx	17,267	...	3	97	...
Oil and gas field contract services:													
Drilling oil and gas wells wells	3,349	34,353	333	0.10	10	1	xxx	xxx	(NA)	23	22	16	[7]39
Oil and gas field contract services, n.e.c.	1,672	11,932	8	([8])	1	1	xxx	xxx	(NA)	25	...	50	[4]25
Nonmetallic minerals (except fuels) mining, total	1,470	15,164	5,158	3.51	340	4,973	709	4	9,331	1	36	44	19
Dimension stone	18	67	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone	655	6,518	528	0.81	81	469	...	4	1,502	...	91	9	...
Sand and gravel	547	5,529	3,894	7.12	704	3,894	709	...	7,093	...	36	39	[4]25
Other industries	250	3,050	736	2.94	241	610	...	...	736	1	...	99	...

NA Not available.

[1]Excludes water used for flooding in oil and gas fields.

[2]For the Crude petroleum and Natural gas extraction industry represents a distribution of fresh water only. The total water intake for these industries includes 6,803 million gallons of brackish water.

[3]For computations of water intake for production worker, including mine water used, see table 2.

[4]Represents "not specified."

[5]See table 1, footnote 6.

[6]For industries other than Natural gas liquids, includes water intake only.

[7]Includes "not specified" as follows: for Crude petroleum and Natural gas, 15 percent; and for Drilling oil and gas wells services, 33 percent.

[8]Less than 0.005 percent.

KENTUCKY

116-1

MINING IN KENTUCKY: 1954

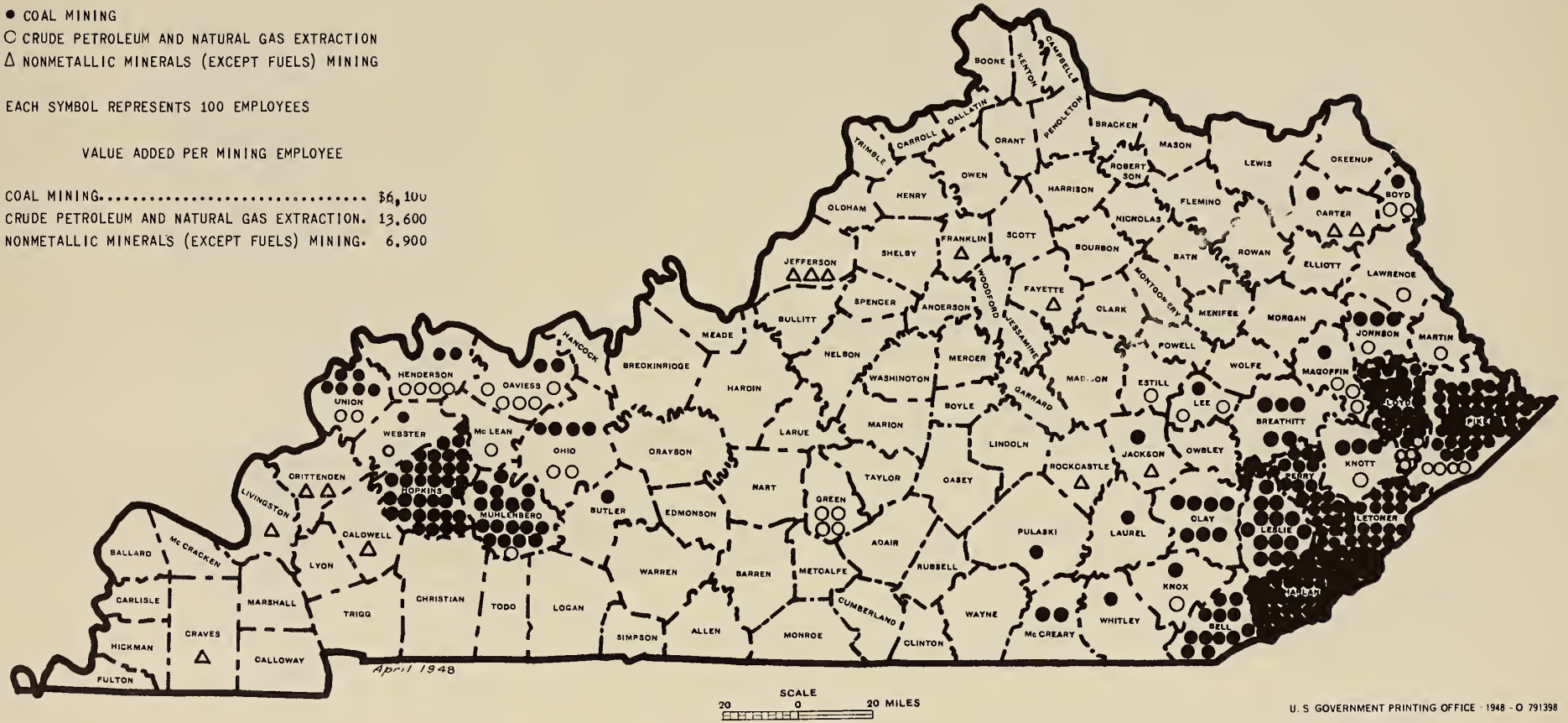
Rank among States:
Employment, 6
Value of shipments, 10

● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

COAL MINING	$6,100
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	13,600
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	6,900



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KENTUCKY



Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries, and common clay and shale and contract service operations		
	1954	1939[1]	1919[2]	1909[2]	1902[3]	1954	1939[4]	1929
Number of operating companies	1,735	660	(NA)	[5]441	[5]723	1,222	[5]533	(NA)
Number of establishments	1,828	(NA)	949	464	(NA)	1,311	(NA)	554
Number of mines and quarries	1,334	617	867	444	876	1,321	604	632
Number of oil and gas wells producing at end of year	17,356	9,868	5,214	1,109	380	xxx	xxx	xxx
Number of preparation plants	205	126	(NA)	(NA)	(NA)	198	124	(NA)
Value of shipments[6]....$1,000	366,082	91,806	98,487	12,100	8,533	292,877	81,130	103,850
Value added in mining....do	272,203	77,169	76,852	10,370	6,846	211,985	68,315	87,676
Number of persons engaged, total	41,277	54,222	48,026	19,691	11,581	36,175	52,269	61,255
Production and development workers	35,842	51,452	43,631	18,316	[7]10,687	31,717	49,743	57,831
All other employees	3,075	2,387	3,960	1,033	894	2,720	2,215	[8]3,214
Proprietors and firm members	2,360	383	435	342	(NA)	1,738	311	210
Performing manual labor	1,472	200	115	75	(NA)	1,248	182	(NA)
Man-hours worked by production and development workers....1,000	59,702	73,891	(NA)	(NA)	(NA)	52,313	71,333	(NA)
Principal expenses designated below, total....$1,000	245,212	71,608	78,590	10,540	7,596	208,428	67,894	85,563
Wages of production and development workers....do	124,206	52,338	49,622	7,835	5,220	112,293	50,813	62,799
Salaries of all other employees....do	15,164	4,633	7,333	975	689	13,711	4,266	[8]6,590
Minerals received for preparation....do	24,775	(NA)	[9]41	...	(NA)	23,286	(NA)	(NA)
Supplies....do	56,228	10,217	15,734	1,325	1,276	46,414	9,506	12,097
Fuel[10]....do	3,459	771	1,942	219		2,461	592	910
Purchased electric energy....do	6,475	2,565	585			6,031	2,559	3,095
Contract work....do	14,905	1,084	3,333	186	411	4,232	158	72
Purchased machinery installed....do	18,756		(NA)			12,146		3,031
Capital expenditures, total....do	30,719	(NA)	(NA)			13,678	(NA)	(NA)
Development and exploration of mineral property....do	8,718		13,103	(NA)	(NA)	457		1,653
Preparation plant construction....do	3,033	564				2,401	461	
Other construction....do	1,978		(NA)			717		(NA)
New machinery and equipment....do	14,294	2,431				8,045	1,838	
Used plant and equipment....do	2,696	359				2,058	257	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	943	332	150	53	20	714	300	318
Per production worker	26	6	3	3	2	23	6	5
Prime movers....1,000	501	97	103	52	20	298	67	79
Electric motors driven by purchased energy....do	442	235	47	1	[12]	416	233	239
Horsepower rating of electric motors driven by energy generated at establishment....do	16	35	54	12	2	14	35	50
Energy used....million kwh equivalent	3,514	2,322	(NA)			1,434	1,961	4,382
Coal[11]....1,000 short tons	45	230	725			39	228	541
Fuel oils....1,000 barrels	296	17	38	(NA)	(NA)	267	16	5
Gas[11]....million cu.ft	5,792	1,014	752			31	22	102
Electric energy purchased....million kwh	430	177	(NA)			405	176	176
Electric energy generated and used....do	32	32	(NA)			23	32	56

NA Not available.
xxx Not applicable.

[1]Excludes data for dimension stone dressing plants, if any, operated in conjunction with 3 dimension stone quarries. In "Comparative statistics for all operations" includes data for one or two oil and gas field hauling operations with receipts for services amounting to less than $45,000; such operations were not classified in the mineral industries for 1954.

[2]Excludes data for sand, gravel, common clay, and shale operations; and limestone quarries operated as part of lime plants. In 1939, the value of products of sand, gravel, common clay, and shale operations was $1,241,000.

[3]Excludes data for sand, gravel, common clay, and shale operations. Includes data for one cement plant and for lime plants producing lime valued as $16,000.

[4]Excludes data for 4 nonproducing mines. See also footnote 1.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]Figures for clay operations classified in the manufacturing industries include the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Includes natural gas purchased for resale.

[10]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[11]Includes data for fuels produced and used at the same establishment for power or heat.

[12]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Kentucky, total		Bituminous coal mining			Crude petroleum and natural gas extraction			
		Including operations classified in manufactures	Mineral industries only	Total	Bituminous coal	Bituminous coal mining contract services	Total	Crude petroleum	Natural gas	Natural gas liquids
1	Number of operating companies	1,735	1,722	1,091	1,086	5	494	281	46	5
2	Number of establishments	1,828	1,816	1,150	1,145	5	503	282	47	6
	Number of mines, quarries, and producing oil and gas wells:									
3	1954	18,690	18,677	1,159	1,159	xxx	17,356	14,243	2,367	xxx
4	1939	10,485	(NA)	481	481	xxx	9,868	(NA)	(NA)	xxx
5	Number of preparation plants	205	205	81	81	xxx	6	xxx	xxx	6
	Value of shipments:[1]									
6	1954.....$1,000	366,082	365,877	268,870	267,461	1,409	72,496	41,702	12,254	7,445
7	1939[2].....do	91,806	(NA)	74,182	74,164	18	10,597	[3]9,388	([3])	706
8	Value added in mining.....do	272,203	272,103	194,233	193,094	1,139	[4]59,735	34,304	12,103	([4])
9	Number of persons engaged, total	41,277	41,255	33,468	33,397	71	5,016	2,896	396	180
10	Production and development workers	35,842	35,820	29,479	29,416	63	4,048	2,292	312	175
11	All other employees	3,075	3,075	2,375	2,371	4	347	251	34	5
12	Proprietors and firm members	2,360	2,360	1,614	1,610	4	621	353	50	...
13	Performing manual labor	1,472	1,472	1,196	1,192	4	224	91	9	...
	Man-hours worked by production and development workers:									
14	1954.....1,000	59,702	59,659	47,441	47,333	108	7,227	4,113	504	357
15	1939[2].....do	73,891	(NA)	[5]65,901	[5]65,884	17	[5]2,399	[3] [5]2,100	([3])	131
	At mines:									
16	Underground.....do	38,072	38,072	37,094	37,094	...	xxx	xxx	xxx	xxx
17	Open-pit.....do	3,854	3,811	2,188	2,082	106	xxx	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.).....do	[10]551	[10]551	8,159	8,157	2	xxx	xxx	xxx	xxx
19	At preparation plants.....do	[10]10,355	[10]10,355			...	357	xxx	xxx	357
20	At oil and gas field operations.....do	6,870	6,870	xxx	xxx	xxx	6,870	4,113	504	xxx
21	Man-hours spent on development and exploration work (included above).....do	2,717	2,717	62	62	...	2,614	701	48	xxx
22	Principal expenses designated below, total.....$1,000	245,212	245,050	194,015	193,397	618	[4]36,284	22,656	3,302	[4]1,775
23	Wages of production and development workers.....do	124,206	124,149	105,702	105,369	333	11,670	6,534	972	839
24	Salaries of all other employees.....do	15,164	15,164	12,045	12,030	15	1,427	1,072	104	26
25	Minerals received for preparation.....do	24,775	24,775	22,711	22,711	xxx	[4]12,670	xxx	xxx	[4]2,035
26	Supplies.....do	[7]56,228	56,123	42,858	42,656	202		5,944	703	
	Purchased fuel:									
27	Coal.....do	[7]88	88	2	2	...	...	...	...	...
28	Fuel oil.....do	[7]1,437	1,437	801	769	32	140	30	5	...
29	Gas.....do	[7]96	96	11	11	...	79	32	4	10
30	Other fuels.....do	[7]1,838	1,838	584	570	14	725	331	29	...
31	Purchased electric energy.....do	[7]6,475	6,475	5,537	5,537	...	427	406	4	10
32	Contract work.....do	[7]14,905	14,905	3,764	3,742	22	10,635	8,307	1,481	344
33	Purchased machinery installed.....do	[8]18,756	18,756	9,953	9,933	20	6,604	4,697	723	520
34	Capital expenditures, total.....do	[8]30,719	30,719	11,584	11,564	20	17,030	12,349	2,798	1,153
35	Development and exploration of mineral property.....do	[8]8,718	8,718	387	387	xxx	8,261	6,339	1,846	...
36	Preparation plant construction.....do	[8]3,033	3,033	2,209	2,209	xxx	627	xxx	xxx	627
37	Other construction.....do	[8]1,978	1,978	629	628	1	1,261	1,036	218	...
38	New machinery and equipment.....do	[8]14,294	14,294	6,621	6,602	19	6,243	4,572	734	526
39	Used plant and equipment.....do	[8]2,696	2,696	1,738	1,738	...	638	402	...	...
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	[8]943	943	557	553	4	228	110	10	37
41	Per production worker	26	26	19	19	70	56	48	32	216
42	Prime movers.....1,000	[8]501	501	179	175	4	203	85	10	37
43	Electric motors driven by purchased energy.....do	[8]442	442	378	378	...	25	25	([5])	...
44	Horsepower rating of electric motors driven by energy generated at establishment.....do	[8]16	16	11	11	...	2	([5])	...	2
45	Energy used.....million kwh equivalent	[8]3,514	3,514	1,037	1,025	12	2,028	758	80	958
	Produced and used for fuel:									
46	Coal.....1,000 short tons	31	31	31	31	xxx	xxx	xxx	xxx	xxx
47	Crude petroleum.....1,000 barrels	1	1	xxx	xxx	xxx	1	1	...	...
48	Natural gas.....million cu.ft	5,358	5,358	xxx	xxx	xxx	5,358	1,914	214	3,026
	Purchased fuel:									
49	Coal.....1,000 short tons	[8]14	14	1	1	...	...	...	...	...
50	Fuel oil.....1,000 barrels	[8]295	295	151	146	5	29	8	1	...
51	Gas.....million cu.ft	[8]434	434	19	19	...	403	158	18	85
52	Electric energy purchased.....million kwh	[8]430	430	381	381	...	24	23	([5])	1
53	Electric energy generated and used.....do	[8]32	32	18	18	...	9	1	...	7
54	Water intake, including mine water used.....million gallons	[8]9,556	9,556	3,712	3,712	...	3,399	1,792	5	1,565
55	Per production worker.....do	0.27	0.27	0.13	0.13	...	0.84	0.78	0.02	8.94

NA Not available. xxx Not applicable. [1]See table 1, footnote 6. [2]See table 1, footnote 1. [3]Figures for the Natural gas industry are included with those for the Crude petroleum industry. [4]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown for these industries.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction—Continued		Metal mining and Nonmetallic minerals (except fuels) mining											
		Total				Clay, ceramic, and refractory minerals							
						Total							
Drilling oil and gas wells	Oil and gas field contract services, n.e.c.	Including operations classified in manufactures	Mineral industries only	Crushed and broken stone	Sand and gravel	Including operations classified in manufactures	Mineral industries only	Fire clay (mineral industries only)	Kaolin and ball clay	Clay, ceramic, and refractory minerals, n.e.c. (mineral industries only)	Fluorspar	Other industries	
140	28	151	138	66	20	29	17	10	4	3	29	7	1
140	28	175	163	84	22	33	21	14	4	3	29	7	2
740	6	175	162	84	22	33	21	14	4	3	29	6	3
(NA)	(NA)	136	(NA)	56	15	27	(NA)	(NA)	4	(NA)	30	8	4
xxx	xxx	118	118	83	22	4	4	...	3	1	7	2	5
9,735	1,360	24,716	24,511	14,417	4,375	3,122	2,917	1,105	1,363	449	1,949	853	6
367	136	7,027	(NA)	2,067	1,180	1,207	(NA)	(NA)	598	(NA)	1,633	940	7
6,570	1,079	18,235	18,135	10,821	3,312	2,447	2,347	969	1,078	300	974	681	8
1,274	270	2,793	2,771	1,533	434	426	404	270	86	48	240	160	9
1,040	229	2,315	2,293	1,293	323	380	358	238	80	40	184	135	10
51	6	353	353	181	89	33	33	22	3	8	31	19	11
183	35	125	125	59	22	13	13	10	3	...	25	6	12
106	18	52	52	16	7	6	6	5	1	...	21	2	13
1,865	388	5,034	4,991	2,867	891	624	581	303	190	88	371	281	14
135	33	[5]5,591	(NA)	2,007	575	1,042	(NA)	(NA)	249	(NA)	1,348	[5]619	15
xxx	xxx	978	978	489	34	273	273	243	...	30	182	...	16
xxx	xxx	1,666	1,623	839	[6]478	178	135	33	70	32	2	169	17
xxx	xxx	549	549	340	(NA)	123	123	27	90	6	57	29	18
xxx	xxx	1,841	1,841	1,199	379	50	50	...	30	20	130	83	19
1,865	388	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
1,828	37	41	41	7	14	5	5	5	...	...	15	...	21
6,274	788	14,913	14,751	7,821	2,862	1,937	1,775	843	594	338	1,705	588	22
2,776	549	6,834	6,777	3,640	1,207	1,071	1,014	591	265	158	584	332	23
208	17	1,692	1,692	760	545	157	157	107	24	26	148	82	24
xxx	xxx	575	575	3	...	...	3	...	3	...	569	...	25
2,354	145	[7]3,678	3,573	2,161	781		314	126	138	50	198	119	26
...	...	[7]86	86	5	33		35	...	...	35	12	1	27
104	1	[7]496	496	241	137	709	56	7	49	...	48	14	28
32	1	[7]6	6	2	4		...	...	...	...	...	...	29
296	69	[7]529	529	407	45		29	5	10	14	16	32	30
4	3	[7]511	511	388	33		33	5	11	17	49	8	31
500	3	[7]506	506	214	77		134	2	94	38	81	...	32
519	145	[8]2,199	2,199	1,454	520		90	43	41	6	45	90	33
644	86	[8]2,105	2,105	1,279	567		124	52	61	11	43	92	34
76	...	[8]70	70	1	55		14	7	7	...	...	...	35
xxx	xxx	[8]197	197	115	47		15	...	10	5	10	10	36
6	1	[8]88	88	75	3		7	4	3	...	2	1	37
340	71	[8]1,430	1,430	978	261		88	41	41	6	31	72	38
222	14	[8]320	320	110	201	(NA)	...	...	...	...	...	9	39
61	10	[8]158	158	108	25		10	4	5	1	7	8	40
59	44	68	68	84	79		28	16	57	28	34	59	41
61	10	[8]119	119	82	22		7	3	4	...	3	5	42
...	...	[8]39	39	26	3		3	1	1	1	4	3	43
...	...	[8]3	3	1	2		...	...	...	...	...	...	44
208	24	[8]449	449	221	103		80	5	24	51	33	12	45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
204	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	48
...	...	[8]13	13	1	4		6	...	...	6	2	(9)	49
20	(9)	[8]115	115	54	34		14	2	12	...	11	2	50
120	22	[8]12	12	4	8		...	...	...	...	...	...	51
(9)	(9)	[8]25	25	18	1	(NA)	2	(9)	1	1	3	1	52
1	...	[8]5	5	1	4		...	...	...	...	...	...	53
37	...	[8]2,445	2,445	384	1,964		20	...	...	20	69	8	54
0.04	...	1.06	1.07	0.30	6.08		0.05	...	...	0.50	0.38	0.06	55

[5]Figures for 3 nonproducing bituminous coal mines and for nonproducing crude petroleum and natural gas establishments are included with those for "Other industries." [6]Includes man-hours worked on floating equipment. [7]Figures for fuels, electric energy, and contract work for clay operations classified in manufactures are included with figures for supplies. [8]Excludes figures for clay operations classified in manufactures. [9]Less than one-half of the unit of measure specified. [10]For Bituminous coal, man-hours at surface are included with man-hours at preparation plant.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Kentucky, all mineral operations:									
Including operations in manufactures	1,828	366,082	272,203	35,842	3,075	59,702	124,206	15,164	[2]28,023
Mineral industries only:									
Including crude petroleum and natural gas extraction	1,816	365,877	272,103	35,820	3,075	59,659	124,149	15,164	28,023
Excluding crude petroleum and natural gas extraction	1,313	293,381	212,368	31,772	2,728	52,432	112,479	13,737	11,631
Bituminous coal mining	1,150	268,870	194,233	29,479	2,375	47,441	105,702	12,045	9,846
Crude petroleum and natural gas extraction, total	503	72,496	[3]59,735	4,048	347	7,227	11,670	1,427	16,392
Crude petroleum and Natural gas[4]	329	53,956	46,407	2,604	285	4,617	7,506	1,176	14,745
Natural gas liquids	6	7,445	([3])	175	5	357	839	26	1,153
Oil and gas field contract services[5]	168	11,095	7,649	1,269	57	2,253	3,325	225	494
Metal mining and Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	175	24,716	18,235	2,315	353	5,034	6,834	1,692	[2]1,785
Mineral industries only	163	24,511	18,135	2,293	353	4,991	6,777	1,692	1,785
Crushed and broken stone	84	14,417	10,821	1,293	181	2,867	3,640	760	1,169
Sand and gravel	22	4,375	3,312	323	89	891	1,207	545	366
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	33	3,122	2,447	380	33	624	1,071	157	(NA)
Mineral industries only	21	2,917	2,347	358	33	581	1,014	157	124
Fluorspar	29	1,949	974	184	31	371	584	148	43
Zinc ores, Nonmetallic minerals (except fuels) contract services, and Native asphalt and bitumens	7	853	681	135	19	281	332	82	83
COUNTY									
Allen	12	(NA)	(NA)	[6]37	([6])	(NA)	(NA)	(NA)	(NA)
Barren	6	(NA)	(NA)	[6]7	([6])	(NA)	(NA)	(NA)	(NA)
Bell	60	(NA)	(NA)	[6]1,037	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	56	6,484	5,078	967	46	1,395	3,250	234	179
Boyd	14	(NA)	(NA)	[6]287	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	7	848	644	108	3	237	301	12	101
Breathitt	24	(NA)	(NA)	[6]506	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	21	3,926	2,937	476	20	869	1,926	90	350
Butler	20	(NA)	(NA)	[6]85	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	9	376	334	67	3	117	188	10	17
Caldwell	17	761	500	65	13	147	186	48	25
Carter (mineral industries only)	21	[7]1,478	[7]1,271	283	25	387	699	114	[7]55
Bituminous coal	9	424	368	56	4	97	140	15	13
Nonmetallic minerals (except fuels) mining	11	1,070	915	228	21	290	559	99	42
Christian (mineral industries only)	3	(NA)	(NA)	[6]55	([6])	(NA)	(NA)	(NA)	(NA)
Clay	35	(NA)	(NA)	[6]764	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	32	5,535	2,311	714	19	1,164	1,258	51	89
Clinton	13	(NA)	(NA)	[6]50	([6])	(NA)	(NA)	(NA)	(NA)
Crittenden	16	[7]2,170	[7]1,075	[6]234	([6])	[8]401	[7]629	[7]199	[7]84
Cumberland	6	(NA)	(NA)	[6]17	([6])	(NA)	(NA)	(NA)	(NA)
Daviess (mineral industries only)	76	(NA)	(NA)	[6]553	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	7	1,419	806	159	10	319	590	41	957
Elliott	11	(NA)	(NA)	[6]37	([6])	(NA)	(NA)	(NA)	(NA)
Estill	13	(NA)	(NA)	[6]104	([6])	(NA)	(NA)	(NA)	(NA)
Fayette	4	(NA)	(NA)	[6]65	([6])	(NA)	(NA)	(NA)	(NA)
Floyd	115	(NA)	(NA)	[6]3,572	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	99	38,455	21,922	3,096	175	5,241	11,953	873	760
Graves	4	1,363	1,078	80	3	190	265	24	[7]61
Greenup	6	[7]139	[7]133	17	2	39	48	5	[7]34
Hancock	15	(NA)	(NA)	[6]35	([6])	(NA)	(NA)	(NA)	(NA)
Hardin	5	545	427	41	12	72	97	27	28
Harlan	125	47,868	38,991	6,545	640	10,418	25,036	3,391	983
Hart	8	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.--GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Henderson	74	(NA)	(NA)	[6]460	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	12	760	671	171	10	326	423	33	6
Hopkins (mineral industries only)	57	(NA)	(NA)	[6][3],636	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	51	40,622	30,327	3,138	221	5,255	13,031	1,318	1,603
Jackson	24	(NA)	(NA)	[6]252	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	21	460	333	135	8	220	222	14	45
Jefferson (mineral industries only), total	12	3,850	3,066	258	[8]135	679	983	[8]769	395
Crushed and broken stone	7	1,747	1,393	106	13	229	347	110	234
Sand and gravel	5	2,103	1,673	152	62	450	636	307	161
Johnson, total	73	(NA)	(NA)	[6]343	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	61	1,484	1,056	262	11	342	438	29	12
Crude petroleum and natural gas[9]	12	(NA)	(NA)	[6]70	([6])	(NA)	(NA)	(NA)	(NA)
Knott	45	(NA)	(NA)	[6]327	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	34	2,253	1,779	245	2	371	785	12	11
Knox, total	25	(NA)	(NA)	[6]135	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	22	676	418	94	1	152	205	3	...
Crude petroleum and natural gas[9]	3	(NA)	(NA)	[6]40	([6])	(NA)	(NA)	(NA)	(NA)
Laurel (Bituminous coal only)	13	374	311	95	...	136	180	...	9
Lawrence	24	(NA)	(NA)	[6]98	([6])	(NA)	(NA)	(NA)	(NA)
Lee	25	(NA)	(NA)	[6]286	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	6	416	341	120	5	162	219	13	...
Leslie	37	9,636	7,663	1,338	59	2,235	3,258	166	165
Letcher (Bituminous coal only)	150	26,730	15,072	2,202	204	3,365	7,427	1,107	490
Livingston	6	1,143	932	92	2	246	318	9	148
Logan	6	(NA)	(NA)	[6]32	([6])	(NA)	(NA)	(NA)	(NA)
McCracken	3	252	211	27	...	59	88	...	23
McCreary (Bituminous coal only)	8	1,161	846	170	...	314	542	...	58
McLean	31	(NA)	(NA)	111	([6])	(NA)	(NA)	(NA)	(NA)
Magoffin	15	(NA)	(NA)	[6]292	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[9]	12	(NA)	(NA)	[6]225	([6])	(NA)	(NA)	(NA)	(NA)
Marion	3	(NA)	(NA)	[6]21	([6])	(NA)	(NA)	(NA)	(NA)
Martin	18	(NA)	(NA)	[6]92	([6])	(NA)	(NA)	(NA)	(NA)
Meade	3	(NA)	(NA)	[6]45	([6])	(NA)	(NA)	(NA)	(NA)
Morgan	13	(NA)	(NA)	[6]42	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	10	100	56	19	...	21	29	...	1
Muhlenberg:									
Including crude petroleum and natural gas	41	(NA)	(NA)	[6]1,714	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	30	14,970	12,118	1,599	70	2,393	5,965	368	451
Bituminous coal	27	14,765	11,957	1,570	69	2,343	5,864	363	439
Ohio	66	(NA)	(NA)	[6]533	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	14	4,882	3,880	339	13	590	1,397	86	98
Perry	63	18,304	14,860	2,503	154	3,699	8,448	645	1,444
Pike	181	(NA)	(NA)	[6]4,384	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	163	28,764	22,138	3,784	280	5,974	13,793	1,449	860
Powell (mineral industries only)	12	(NA)	(NA)	[6]28	([6])	(NA)	(NA)	(NA)	(NA)
Pulaski (Bituminous coal only)	14	231	184	66	...	92	116	...	15
Rockcastle (Bituminous coal only)	7	249	198	43	...	69	78	...	2
Rowan (including operations in manufactures)	3	200	141	33	...	58	85	10	...
Todd	3	110	79	18	1	36	33	3	...
Union	34	(NA)	(NA)	[6]739	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[9]	28	(NA)	(NA)	[6]115	([6])	(NA)	(NA)	(NA)	(NA)
Warren	12	(NA)	(NA)	[6]59	([6])	(NA)	(NA)	(NA)	(NA)
Wayne	9	(NA)	(NA)	[6]43	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[9]	5	(NA)	(NA)	[6]24	([6])	(NA)	(NA)	(NA)	(NA)
Webster	39	(NA)	(NA)	[6]161	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[9]	36	(NA)	(NA)	[6]103	([6])	(NA)	(NA)	(NA)	(NA)
Whitley (mineral industries only)	21	1,009	587	118	10	190	353	36	49
Wolfe	9	(NA)	(NA)	[6]18	([6])	(NA)	(NA)	(NA)	(NA)

NA Not available. [1]See table 1, footnote 6. [2]See table 2, footnote 8. [3]See table 2, footnote 4. [4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. [5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries. [6]Figures for "All other employees" are included with those for "Production and development workers." [7]Excludes data for 1 Crude petroleum or Natural gas operation. [8]Includes data for separately reported central office employees. [9]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry	Kentucky, total	Adair	Allen	Anderson	Barren	Bath	Bell	Bourbon	Boyd	Boyle	Breathitt	Breckinridge
All operations, total	1,828	1	12	1	6	2	60	2	14	1	24	5
Classified in mineral industries	1,816	1	12	1	6	2	60	2	14	1	24	4
Included in manufactures	12	...	...	...	...	...	...	...	...	...	...	1
Metal mining (zinc ores)	1	...	...	...	..	...	...	...	...	...	...	...
Bituminous coal mining:												
Bituminous coal	1,145	...	...	...	..	...	56	...	7	...	21	...
Bituminous coal mining contract services	5	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	329	...	11	...	5	2	2	...	4	...	3	2
Natural gas liquids	6	...	...	...	...	...	...	...	2	...	...	...
Oil and gas field contract services[2]	168	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone	1	...	...	...	...	...	...	...	...	...	...	...
Marble	1	...	...	...	...	...	...	...	...	...	...	...
Sandstone	2	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	83	1	1	1	1	...	1	2	...	1	...	2
Sandstone	1	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	21	...	...	...	...	...	1	...	...	...	...	...
Foundry sand	1	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	14	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	4	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	3	...	...	...	...	...	...	...	1	...	...	...
Included in manufactures	10	...	...	...	...	...	...	...	...	...	...	1
Chemical and fertilizer mineral mining (fluorspar)	29	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining contract services	1	...	...	...	...	...	...	...	...	...	...	...
Native asphalt and bitumens	1	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry	Butler	Caldwell	Campbell	Carroll	Carter	Casey	Christian	Clark	Clay	Clinton	Crittenden	Cumberland
All operations, total	20	17	1	2	22	1	4	1	35	13	16	6
Classified in mineral industries	20	17	1	2	21	1	3	1	35	13	16	6
Included in manufactures	...	...	...	...	1	...	1	...	...	...	...	...
Metal mining (zinc ores)	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining:												
Bituminous coal	9	...	...	...	9	...	...	...	32	3	...	...
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	10	...	...	...	1	...	1	...	3	8	1	5
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone	...	...	...	...	...	...	...	...	...	...	...	...
Marble	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	1	2	1	...	1	1	2	1	...	1	1	1
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	...	...	...	2	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	1	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	...	...	...	...	10	...	...	...	...	1	...	...
Included in manufactures	...	...	...	...	1	...	...	...	...	...	...	...
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	1	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	1	...	...	...	...	...
Chemical and fertilizer mineral mining (fluorspar)	...	14	...	...	...	...	...	...	...	...	12	...
Nonmetallic minerals (except fuels) mining contract services	...	...	...	...	...	...	...	...	...	...	1	...
Native asphalt and bitumens	...	...	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry	Daviess	Edmonson	Elliott	Estill	Fayette	Fleming	Floyd	Franklin	Fulton	Gallatin	Garrard	Graves
All operations, total	77	1	11	13	4	1	115	2	1	1	1	4
Classified in mineral industries	76	1	11	13	4	1	115	2	1	1	1	4
Included in manufactures	1	...	...	...	...	...	...	...	...	...	...	...
Metal mining (zinc ores)	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining:												
Bituminous coal	7	...	2	...	...	...	99	...	...	...	...	...
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	68	...	9	12	1	...	14	...	...	...	...	...
Natural gas liquids	...	...	...	...	...	...	1	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone	...	...	...	...	...	...	...	...	...	...	...	...
Marble	...	...	...	...	1	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	...	...	...	1	2	1	...	2	...	...	1	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	1	...	...	...	...	...	1	...	1	1	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...	...	4
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining (fluorspar)	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Native asphalt and bitumens	...	1	...	...	...	...	...	...	...	...	...	...

Industry group and industry	Grayson	Green	Greenup	Hancock	Hardin	Harlan	Harrison	Hart	Henderson	Hopkins	Jackson	Jefferson
All operations, total	2	1	6	15	5	125	1	8	74	58	24	14
Classified in mineral industries	2	1	6	15	5	125	1	8	74	57	24	12
Included in manufactures	...	...	...	...	...	...	...	...	...	1	...	2
Metal mining (zinc ores)	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining:												
Bituminous coal	...	...	2	1	...	125	...	...	12	51	21	...
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	1	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	...	...	1	13	...	...	...	7	61	4	1	...
Natural gas liquids	...	1	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone	...	...	...	...	...	...	...	...	...	...	...	...
Marble	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	2	...	...	...	5	...	1	1	...	1	2	7
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	...	...	1	...	...	...	...	...	1	...	...	5
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	...	...	2	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	1	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	1	...	2
Chemical and fertilizer mineral mining (fluorspar)	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Native asphalt and bitumens	...	...	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry	Jessamine	Johnson	Kenton	Knott	Knox	Laurel	Lawrence	Lee	Leslie	Letcher	Livingston	Logan
All operations, total	2	73	1	45	25	14	24	25	37	152	6	6
Classified in mineral industries	2	73	1	45	25	14	24	25	37	152	6	6
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining	...	...	...	...	...	...	...	...	...	...	1	...
Bituminous coal mining:												
Bituminous coal	...	61	...	34	22	13	9	6	37	150	...	...
Bituminous coal mining contract services	...	...	...	1	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	...	12	...	10	3	1	14	17	...	1	...	3
Natural gas liquids	...	...	...	...	...	...	...	1	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone	1	...	...	...	...	...	...	...	...	...	...	...
Marble	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	1
Crushed and broken stone:												
Limestone	1	...	1	...	...	...	...	1	...	1	2	1
Sandstone	...	...	...	...	...	...	...	...	...	...	...	1
Sand and gravel:												
Common sand and gravel	...	...	...	...	...	...	1	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining (fluorspar)	...	...	...	...	...	...	...	...	...	...	3	...
Nonmetallic minerals (except fuels) mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Native asphalt and bitumens	...	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry	McCracken	McCreary	McLean	Madison	Magoffin	Marion	Martin	Mason	Meade	Menifee	Mercer	Metcalfe
All operations, total	3	9	31	3	15	3	18	2	3	3	1	1
Classified in mineral industries	3	9	31	2	15	3	18	1	3	3	1	1
Included in manufactures	...	...	...	1	...	...	...	1	...	...	...	...
Metal mining	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining:												
Bituminous coal	...	8	3	...	3	...	2	...	...	1	...	...
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	...	...	28	1	12	1	15	...	1	2	...	...
Natural gas liquids	...	...	...	...	...	...	1	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone	...	...	...	...	...	...	...	...	...	...	...	...
Marble	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	1	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	...	...	...	1	...	2	...	...	2	...	1	1
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	3	...	...	...	...	...	...	1	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	1	...	...	...	...	...	...	...	...
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	1	...	...	...	...
Chemical and fertilizer mineral mining (fluorspar)	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Native asphalt and bitumens	...	...	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry	Monroe	Morgan	Muhlenberg	Nelson	Ohio	Oldham	Owsley	Pendleton	Perry	Pike	Powell	Pulaski
All operations, total	1	13	41	2	66	1	5	1	63	181	13	16
Classified in mineral industries	1	13	41	2	66	1	5	1	63	181	12	16
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1	...
Metal mining(zinc ores)	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining:												
Bituminous coal	...	10	27	...	14	...	4	...	63	163	...	14
Bituminous coal mining contract services	...	...	2	...	...	...	...	...	...	1	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	...	2	11	...	51	...	1	...	...	16	12	...
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone	...	...	...	...	...	...	...	...	...	...	...	...
Marble	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	1	1	1	2	1	...	...	1	...	1	...	2
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	...	...	...	...	...	1	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.s.c.:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1	...
Chemical and fertilizer mineral mining (fluorspar)	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Native asphalt and bitumens	...	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry	Rockcastle	Rowan	Simpson	Todd	Trigg	Union	Warren	Wayne	Webster	Whitley	Wolfe
All operations, total	9	3	1	3	1	34	12	9	39	22	9
Classified in mineral industries	9	2	1	3	1	34	12	9	39	21	9
Included in manufactures	...	1	...	...	...	...	...	...	...	1	...
Metal mining(zinc ores)	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining:											
Bituminous coal	7	...	...	...	...	5	...	3	3	21	5
Bituminous coal mining contract services	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:											
Crude petroleum and natural gas[1]	...	...	...	...	...	28	10	5	36	...	4
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:											
Dimension stone:											
Limestone	...	...	...	...	...	...	...	...	...	...	...
Marble	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:											
Limestone	2	1	1	3	1	...	2	1	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:											
Common sand and gravel	...	...	...	...	...	1	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:											
Fire clay:											
Classified in mineral industries	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.s.c.:											
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	1	...	...	...	...	...	...	...	1	...
Chemical and fertilizer mineral mining (fluorspar)	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining contract services	...	...	...	...	...	...	...	...	...	...	...
Native asphalt and bitumens	...	...	...	...	...	...	...	...	...	...	...

NA Not available.
[1]See table 3, footnote 4, and for counties, footnote 9.
[2]See table 3, footnote 5.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Kentucky, all mineral operations:												
Including operations classified in manufactures	1,828	248	641	355	247	183	67	61	18	7	1	...
Mineral industries only	1,816	246	632	355	246	183	67	61	18	7	1	...
Metal mining (zinc ores)	1	...	1	...	...	...	...	...	...	...	...	...
Bituminous coal mining, total	1,150	167	353	244	144	107	53	57	18	6	1	...
Bituminous coal	1,145	167	352	241	144	106	53	57	18	6	1	...
Bituminous coal mining contract services	5	...	1	3	...	1	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	503	58	263	82	48	41	7	3	...	1	...	...
Crude petroleum and natural gas	329	51	184	40	23	23	5	2	...	1	...	...
Natural gas liquids	6	...	...	2	...	3	1	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	140	5	62	34	25	14	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	28	2	17	6	...	1	1	1	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	174	23	24	29	55	35	7	1	...	...	...	...
Mineral industries only	162	21	15	29	54	35	7	1	...	...	...	...
Dimension stone:												
Limestone	1	...	1	...	...	...	...	...	...	...	...	...
Marble	1	...	1	...	...	...	...	...	...	...	...	...
Sandstone	2	...	2	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	83	1	5	11	42	23	1	...	...	...	...	...
Sandstone	1	...	...	1	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	21	...	1	9	4	5	2	...	...	...	...	...
Foundry sand	1	...	...	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	14	2	4	...	4	2	2	...	...	...	...	...
Included in manufactures	2	1	1	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	4	...	...	2	1	...	1	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	3	...	...	1	1	1	...	...	...	...	...	...
Included in manufactures	10	1	8	...	1	...	...	...	...	...	...	...
Fluorspar	29	18	1	4	1	4	1	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	1	...	...	...	...	...	...	...
Native asphalt and bitumens	1	...	...	...	...	...	...	1	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Kentucky, total	35,820	272,103	8,264	0.23	30	6,611	1,292	19,053	39,709	1	65	8	26
Bituminous coal mining, total	29,479	194,233	2,629	0.09	14	1,974	1,083	18,719	11,784	1	88	5	6
Bituminous coal	29,416	193,094	2,629	0.09	14	1,974	1,083	18,719	11,784	1	88	5	[4]6
Bituminous coal mining contract services	63	1,139	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	4,048	[5]59,735	3,399	0.84	57	2,402	xxx	xxx	[5]25,478	1	70	11	18
Crude petroleum and natural gas	2,604	46,407	1,797	0.69	39	917	xxx	xxx	(NA)	...	46	20	34
Natural gas liquids	175	([5])	1,565	8.94	(NA)	1,480	xxx	xxx	23,644	...	99	1	...
Oil and gas field contract services:													
Drilling oil and gas wells	1,040	6,570	37	0.04	6	5	xxx	xxx	(NA)	41	14	...	[6]45
Oil and gas field contract services, n.e.c.	229	1,079	...	...	...	...	xxx	xxx	...	...	...	...	...
Metal mining and Nonmetallic minerals (except fuels) mining, total	2,293	18,135	2,236	0.98	123	2,235	209	334	2,447	1	32	7	60
Crushed and broken stone	1,293	10,821	182	0.14	17	182	202	215	384	...	93	...	7
Sand and gravel	323	3,312	1,964	6.08	593	1,963	...	...	1,966	1	27	4	[4]68
Clay, ceramic, and refractory minerals, total	358	2,347	20	0.06	9	20	...	2	20	...	...	100	...
Fire clay	238	969	...	...	...	...	...	2	...	...	...	...	...
Kaolin and ball clay	80	1,078	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.	40	300	20	0.50	67	20	...	...	20	...	...	100	...
Fluorspar	184	974	62	0.34	64	62	7	97	69	16	3	81	...
Other industries	135	681	8	0.06	12	8	...	20	8	...	100	...	...

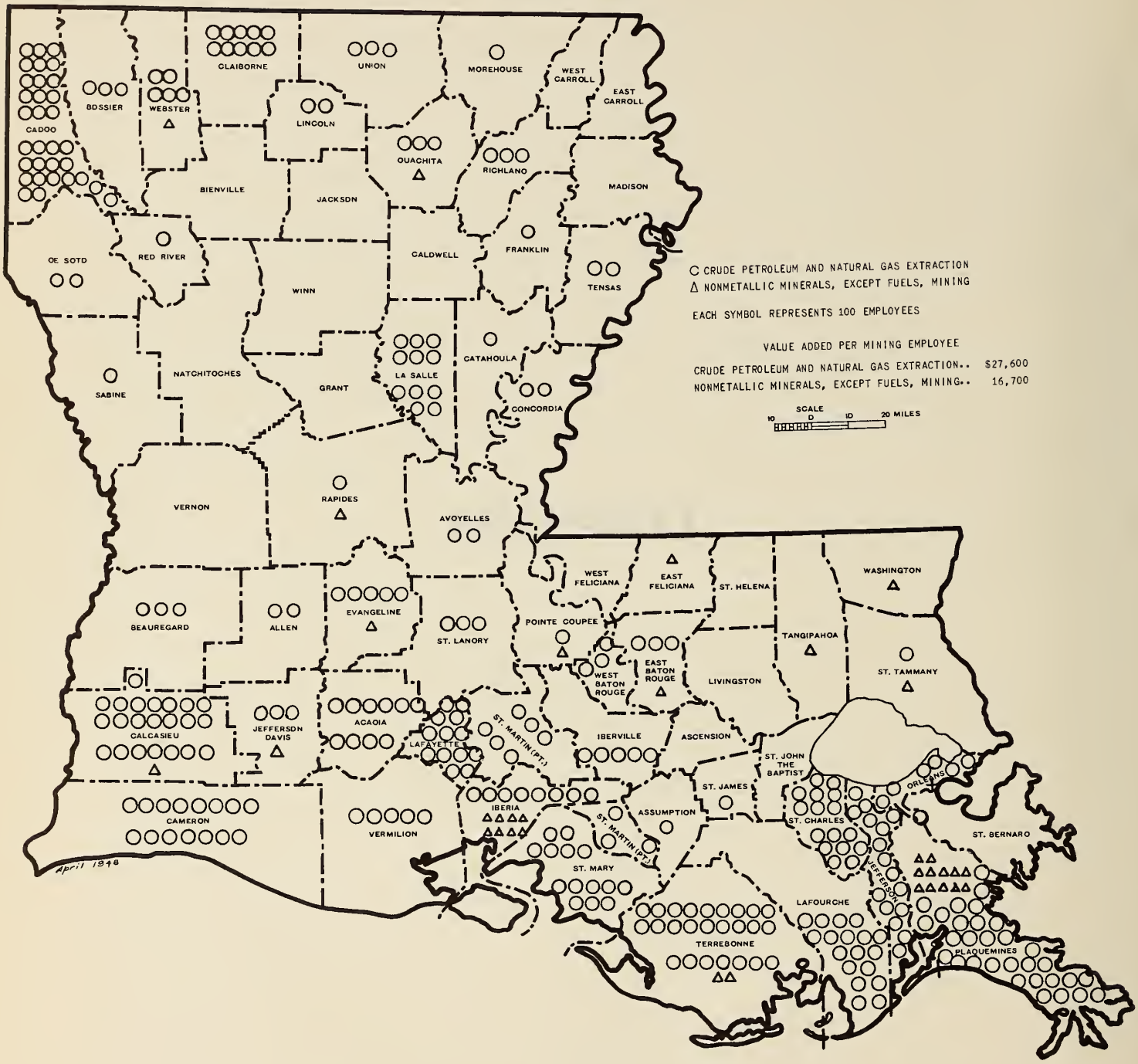
NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 183 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]Includes "not specified" as follows: for Bituminous coal mining contract services, 1 percent; for Sand and gravel, 32 percent.
[5]See table 2, footnote 4.
[6]Represents "not specified."

LOUISIANA

117-1

MINING IN LOUISIANA: 1954

Rank among States:
Employment, 7
Value of shipments, 3



○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS, EXCEPT FUELS, MINING

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

CRUDE PETROLEUM AND NATURAL GAS EXTRACTION..	$27,600
NONMETALLIC MINERALS, EXCEPT FUELS, MINING..	16,700

SCALE
10 0 10 20 MILES

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction, common clay and shale, and contract services industries		
	1954[1]	1939	1919[2]	1909[3]	1902[4]	1954[1]	1939	1929[5]
Number of operating companies	837	531	(NA)	[6]33	[6]12	58	[6]30	(NA)
Number of establishments	911	(NA)	139	33	(NA)	70	(NA)	17
Number of mines and quarries	88	40	...	2	1	70	34	18
Number of oil and gas wells producing at end of year	17,497	6,529	2,479	237	7	xxx	xxx	xxx
Number of preparation plants	131	62	(NA)	(NA)	(NA)	61	33	(NA)
Value of shipments[7]....$1,000	1,195,573	133,828	32,016	6,547	279	73,980	11,012	2,031
Value added in mining....do	984,976	92,879	20,729	4,899	85	60,635	9,517	1,358
Number of persons engaged, total	37,933	14,739	5,719	1,161	82	3,654	1,652	512
Production and development workers	29,575	12,244	4,873	951	[8]70	2,857	1,360	439
All other employees	7,634	2,231	788	138	12	758	285	[9]72
Proprietors and firm members	724	263	58	72	(NA)	39	7	1
Performing manual labor	278	47	2	1	(NA)	18	1	(NA)
Man-hours worked by production and development workers....1,000	65,982	22,496	(NA)	(NA)	(NA)	6,398	2,761	(NA)
Principal expenses designated below, total....$1,000	671,105	65,324	20,576	2,855	246	30,054	3,613	1,336
Wages of production and development workers....do	132,855	18,351	7,083	873	43	10,522	1,314	442
Salaries of all other employees....do	46,634	6,024	1,465	327	9	3,845	804	[9]221
Minerals received for preparation....do	215,437	(NA)	[10]741	[10]7	(NA)	...	(NA)	(NA)
Supplies....do		10,474	7,756	859		12,106	822	341
Fuel[11]....do	13,860	3,367	1,439	727	23	2,266	456	116
Purchased electric energy....do	1,745	447	1			508	208	215
Contract work....do	260,574	26,661	2,091	62	171	807	9	1
Purchased machinery installed....do	150,157		(NA)			2,070		128
Capital expenditures, total....do	431,176	(NA)	(NA)			4,412	(NA)	(NA)
Development and exploration of mineral property....do	266,107		11,212	(NA)	(NA)	50		...
Preparation plant construction....do	11,666	917				739	193	
Other construction....do	21,752		(NA)			1,793		(NA)
New machinery and equipment....do	125,717	22,986				1,659	185	
Used plant and equipment....do	5,934	515				171	96	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	2,354	340	79	8	4	132	39	14
Per production worker	80	28	16	8	66	46	29	32
Prime movers....1,000	2,278	316	79	8	4	107	28	5
Electric motors driven by purchased energy....do	76	24	([12])	...	...	25	11	9
Horsepower rating of electric motors driven by energy generated at establishment....do	98	15	([12])	...	...	23	10	...
Energy used....million kwh equivalent	43,447	16,448	(NA)			3,880	1,004	127
Coal....1,000 short tons	2	2	...			2	2	8
Fuel oils....1,000 barrels	1,206	863	418	(NA)	(NA)	103	47	32
Gas[13]....million cu.ft	129,929	48,519	13,552			11,622	2,908	...
Electric energy purchased....million kwh	125	30	(NA)			44	14	11
Electric energy generated and used....do	192	22	(NA)			38	14	...

NA Not available.

[1]All figures except number of operating companies, number of establishments, number of mines and quarries, and number of preparation plants exclude data for 2 crushed and broken limestone quarries operated as part of cement plants.

[2]Excludes data for one limestone establishment and one sulfur establishment.

[3]Excludes data for 2 nonproducing establishments.

[4]Represents data for 3 producing and 9 nonproducing operators.

[5]Excludes data for one limestone establishment.

[6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[7]For clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[10]Includes data for gas purchased for resale.

[11]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[12]Less than one-half of the unit of measure specified.

[13]Includes data for gas produced and used at the same establishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Louisiana, total		Crude petroleum and natural gas extraction			
		Including operations classified in manufactures[1]	Mineral industries only	Total	Crude petroleum	Natural gas	Natural gas liquids
1	Number of operating companies	837	828	766	372	85	29
2	Number of establishments	911	895	823	377	86	52
	Number of mines, quarries, and producing oil and gas wells:						
3	1954	17,585	17,569	17,497	14,486	2,845	xxx
4	1939	6,569	(NA)	6,529	(NA)	(NA)	xxx
5	Number of preparation plants	131	115	52	xxx	xxx	52
	Value of shipments:[2]						
6	1954.....$1,000	1,195,573	1,194,947	1,119,796	786,312	61,283	61,515
7	1939.....do	133,828	(NA)	122,771	[3]106,664	([3])	3,482
8	Value added in mining.....do	984,976	984,473	[5]922,777	683,386	55,502	([5])
9	Number of persons engaged, total	37,933	37,832	34,095	16,131	1,223	1,208
10	Production and development workers	29,575	29,474	26,538	10,997	631	1,010
11	All other employees	7,634	7,634	6,874	4,776	552	191
12	Proprietors and firm members	724	724	683	358	40	7
13	Performing manual labor	278	278	260	104	9	...
	Man-hours worked by production and development workers:						
14	1954.....1,000	65,982	65,780	59,222	22,803	1,319	2,092
15	1939.....do	22,496	(NA)	19,696	[3]15,331	([3])	640
	At mines:						
16	Underground.....do	368	368	...	...	...	...
17	Open-pit.....do	1,344	1,142	...	...	...	...
18	Surface (mine shops, yards, etc.).....do	1,632	1,632	...	...	...	...
19	At preparation plants.....do	4,774	4,774	2,092	...	...	2,092
20	At well operations.....do	57,864	57,864	57,130	22,803	1,319	...
21	Man-hours spent on development and exploration work (included above).....do	32,108	32,108	32,014	8,441	151	(NA)
22	Principal expenses designated below, total.....$1,000	671,105	670,744	[5]640,022	430,951	33,106	[5]20,074
23	Wages of production and development workers.....do	132,855	132,617	121,877	54,358	2,580	4,897
24	Salaries of all other employees.....do	46,634	46,634	42,780	29,464	3,113	1,034
25	Minerals received for preparation.....do	[7]215,437	215,314	[5]203,073	...	...	[5]6,777
26	Supplies.....do				117,287	7,912	
	Purchased fuel:						
27	Coal.....do	[7]8	8	([9])	([9])	...	...
28	Fuel oil.....do	[7]4,911	4,911	4,463	1,419	2	8
29	Gas.....do	[7]3,982	3,982	2,343	351	53	10
30	Other fuels.....do	[7]4,949	4,959	4,680	1,844	92	24
31	Purchased electric energy.....do	[7]1,745	1,745	1,210	958	51	148
32	Contract work.....do	[7]260,574	260,574	259,596	225,270	19,303	7,176
33	Purchased machinery installed.....do		150,157	148,061	99,124	7,280	7,010
34	Capital expenditures, total.....do		431,176	426,407	343,327	28,912	16,043
35	Development and exploration of mineral property.....do		266,107	266,055	245,172	18,594	...
36	Preparation plant construction.....do		11,666	10,750	...	...	10,750
37	Other construction.....do		21,752	19,791	16,817	2,398	...
38	New machinery and equipment.....do		125,717	124,048	80,089	7,459	5,210
39	Used plant and equipment.....do		5,934	5,763	1,249	461	83
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	(NA)	2,354	2,220	884	42	173
41	Per production worker		80	84	80	67	172
42	Prime movers.....1,000		2,278	2,170	841	40	171
43	Electric motors driven by purchased energy.....do		76	50	43	2	2
44	Horsepower rating of electric motors driven by energy generated at establishment.....do		98	75	12	([9])	11
45	Energy used.....million kwh equivalent		43,447	39,325	23,301	720	8,898
	Produced and used for fuel:						
46	Crude petroleum.....1,000 barrels	17	17	17	17	...	...
47	Natural gas.....million cu. ft	97,321	97,321	97,321	67,333	1,167	28,789
	Purchased fuels:						
48	Coal.....1,000 short tons		2	([9])	([9])	...	...
49	Fuel oil.....1,000 barrels		1,206	1,102	501	([9])	3
50	Gas.....million cu. ft		32,608	20,211	3,836	1,084	48
51	Electric energy purchased.....million kwh		125	79	57	4	13
52	Electric energy generated and used.....do	(NA)	192	154	69	2	61
53	Water intake, including mine water used.....million gallons		44,362	33,662	5,790	130	26,415
54	Per production worker.....do		1.50	1.27	0.53	0.21	26.15

NA Not available. xxx Not applicable. [1]See table 1, footnote 1. [2]See table 1, footnote 7. [3]Figures for the Natural gas industry are included with those for the Crude petroleum industry. [4]Figures for all other Oil and gas field contract services are included with those for Drilling oil and gas wells services. [5]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction—Continued			Nonmetallic minerals (except fuels) mining							
Oil and gas field contract services			Total		Sand and gravel	Clay, ceramic, and refractory minerals, n.e.c.		Rock salt	Other industries	
Drilling oil and gas wells	Building, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Including operations classified in manufactures[1]	Mineral industries only		Including operations classified in manufactures	Mineral industries only			
134	18	156	71	62	48	13	4	4	6	1
134	18	156	88	72	56	18	4	4	8	2
113	...	53	88	72	56	18	4	4	8	3
(NA)	(NA)	(NA)	40	(NA)	25	6	(NA)	4	5	4
xxx	xxx	xxx	79	63	52	18	4	4	3	5
147,721	2,612	60,353	75,777	75,151	10,924	1,797	1,171	13,109	49,947	6
[4]12,625	([4])	([4])	11,057	(NA)	1,591	44	(NA)	2,189	7,233	7
96,696	2,192	40,849	62,199	61,696	7,363	1,564	1,061	10,113	43,159	8
9,154	321	6,058	3,838	3,737	1,157	184	83	855	1,642	9
8,079	266	5,555	3,037	2,936	1,007	180	79	704	1,146	10
967	35	353	760	760	112	2	2	151	495	11
108	20	150	41	41	38	2	2	...	1	12
78	9	60	18	18	17	...	...	...	1	13
20,133	370	12,505	6,760	6,558	2,446	362	160	1,574	2,378	14
[4]3,725	([4])	([4])	2,800	(NA)	1,013	39	(NA)	1,044	704	15
...	...	...	368	368	...	...	...	368	...	16
...	...	...	1,344	1,142	[6]1,041	229	27	...	74	17
...	...	...	1,632	1,632	...	...	...	99	1,533	18
...	...	...	2,682	2,682	1,405	133	133	1,107	37	19
20,133	370	12,505	734	734	...	...	...	...	734	20
19,528	322	3,572	94	94	7	...	...	...	87	21
100,094	1,427	42,117	31,083	30,722	7,033	1,029	668	6,544	16,477	22
39,788	918	19,336	10,978	10,740	2,972	456	218	2,330	5,220	23
7,130	101	1,938	3,854	3,854	395	9	9	700	2,750	24
...	...	...	...	...	(NA)	...	...	...	...	25
42,393	360	16,091	[7]12,364	12,241	2,577		135	[8]3,268	[8]6,940	26
...	...	...	[7]8	8	8		...	...	...	27
2,382	19	633	[7]448	448	301	564	5	8	...	28
1,926	...	3	[7]1,639	1,639	1		103	137	...	29
1,564	24	1,131	[7]279	279	255		...	2	...	30
27	2	24	[7]535	535	396		27	99	13	31
4,884	2	2,961	[7]978	978	128		171	([8])	([8])	32
30,251	88	4,308		2,096	654		26	668		33
32,402	76	5,647		4,769	759		357	1,186		34
2,289	...	...		52	50		2	...		35
...	...	...		916	65		177	674		36
270	76	230		1,961	40		168	26		37
26,123	...	5,167		1,669	433		10	486		38
3,720	...	250		171	171		...	...		39
			(NA)			(NA)			(NA)	
551	5	565		134	57		2	17		40
68	19	102		46	56		30	24		41
550	5	563		108	41		1	8		42
1	...	2		26	16		1	9		43
51	...	1		23	([9])		...	3		44
5,859	15	532		4,122	227		242	342		45
...	...	...	...	...	...	...	...	...	...	46
22	...	10	...	...	...	...	...	...	...	47
...	...	...		2	2		...	...		48
457	5	136		104	67		1	2		49
15,207	...	36		12,397	7		775	1,067		50
2	([9])	3		46	34		2	9		51
22	([9])	...	(NA)	38	1	(NA)	...	6	(NA)	52
1,275	20	32		10,700	4,806		11	2,112		53
0.16	0.08	0.01		3.64	4.77		0.14	3.00		54

mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown for these industries. [6]Includes man-hours worked on floating equipment. [7]Figures for fuels, electric energy, and contract work for clay operations classified in manufactures are included with figures for supplies. [8]Cost of contract work is included with cost of supplies. [9]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED PARISHES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

Parish and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Louisiana, all mineral operations:									
Including operations in manufactures[1]	911	1,195,573	984,976	29,575	7,634	65,982	132,855	46,634	(NA)
Mineral industries only:									
Including crude petroleum and natural gas extraction	895	1,194,947	984,473	29,474	7,634	65,780	132,617	46,634	425,242
Excluding crude petroleum and natural gas	72	75,151	61,696	2,936	760	6,558	10,740	3,854	4,598
Crude petroleum and natural gas extraction, total	823	1,119,796	[2]922,777	26,538	6,874	59,222	121,877	42,780	420,644
Crude petroleum and natural gas[3]	463	847,595	738,888	11,628	5,328	24,122	56,938	32,577	370,529
Natural gas liquids	52	61,515	(NA)	1,010	191	2,092	4,897	1,034	15,960
Oil and gas field contract services[4]	308	210,686	139,737	13,900	1,355	33,008	60,042	9,169	34,155
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures[1]	88	75,777	62,199	3,037	760	6,760	10,978	3,854	(NA)
Mineral industries only	72	75,151	61,696	2,936	760	6,558	10,740	3,854	4,598
Sand and gravel	56	10,924	7,363	1,007	112	2,446	2,972	395	588
Clay, ceramic, and refractory minerals, n.e.c. (including operations in manufactures)	18	1,797	1,564	180	2	362	456	9	(NA)
Rock salt, Sulfur, and Other industries (mineral industries only)	12	63,056	53,272	1,850	646	3,952	7,550	3,450	(NA)
PARISH									
Acadia, total	50	(NA)	(NA)	[5]514	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	45	(NA)	(NA)	[5]430	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Clay, ceramic, and refractory minerals	5	3,374	(NA)	75	9	176	354	52	30
Allen	9	(NA)	(NA)	[5]75	([5])	(NA)	(NA)	(NA)	(NA)
Assumption	8	(NA)	(NA)	[5]47	([5])	(NA)	(NA)	(NA)	(NA)
Avoyelles	7	(NA)	(NA)	[5]116	([5])	(NA)	(NA)	(NA)	(NA)
Beauregard, total	25	(NA)	(NA)	[5]147	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	20	(NA)	(NA)	[5]98	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	5	619	(NA)	40	9	75	185	38	(D)
Bienville	9	(NA)	(NA)	[5]18	([5])	(NA)	(NA)	(NA)	(NA)
Bossier	42	(NA)	(NA)	[5]188	([5])	(NA)	(NA)	(NA)	(NA)
Caddo, total	185	(NA)	(NA)	[5]1,594	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	177	(NA)	(NA)	[5]1,516	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	8	881	(NA)	70	8	162	267	33	45
Calcasieu	40	(NA)	(NA)	[5]1,131	([5])	(NA)	(NA)	(NA)	(NA)
Cameron	26	(NA)	(NA)	[5]676	([5])	(NA)	(NA)	(NA)	(NA)
Catahoula	11	(NA)	(NA)	[5]50	([5])	(NA)	(NA)	(NA)	(NA)
Claiborne, total	55	(NA)	(NA)	[5]490	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	49	(NA)	(NA)	[5]408	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	6	2,379	(NA)	70	12	144	341	56	46
Concordia	18	(NA)	(NA)	[5]91	([5])	(NA)	(NA)	(NA)	(NA)
De Soto	19	(NA)	(NA)	[5]72	([5])	(NA)	(NA)	(NA)	(NA)
Evangeline, total	18	(NA)	(NA)	[5]379	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	14	(NA)	(NA)	[5]188	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	4	2,871	(NA)	190	1	436	755	6	51
East Baton Rouge (mineral industries only), total	17	(NA)	(NA)	[5]183	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	11	(NA)	(NA)	[5]160	([5])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	6	1,044	680	104	19	214	257	58	30
Franklin	10	(NA)	(NA)	[5]14	([5])	(NA)	(NA)	(NA)	(NA)
Grant	7	(NA)	(NA)	[5]28	([5])	(NA)	(NA)	(NA)	(NA)
Iberia, total	21	(NA)	(NA)	[5]1,246	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	17	(NA)	(NA)	[5]476	([5])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	4	11,666	9,152	637	133	1,452	2,138	608	1,163

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED PARISHES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

Parish and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
PARISH—Continued									
Iberville	18	(NA)	(NA)	[5]273	([5])	(NA)	(NA)	(NA)	(NA)
Jefferson	21	(NA)	(NA)	[5]729	([5])	(NA)	(NA)	(NA)	(NA)
Jefferson Davis, total	19	(NA)	(NA)	[5]252	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	14	(NA)	(NA)	[5]114	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	5	2,909	(NA)	113	25	257	479	147	739
Lafayette (mineral industries only)	22	(NA)	(NA)	[5]579	([5])	(NA)	(NA)	(NA)	(NA)
Lafourche	38	(NA)	(NA)	[5]817	([5])	(NA)	(NA)	(NA)	(NA)
La Salle	28	(NA)	(NA)	[5]527	([5])	(NA)	(NA)	(NA)	(NA)
Lincoln (mineral industries only), total	19	(NA)	(NA)	[5]160	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	15	(NA)	(NA)	[5]62	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Clay, ceramic, and refractory minerals	4	8,983	(NA)	79	19	172	373	96	60
Morehouse	6	(NA)	(NA)	[5]42	([5])	(NA)	(NA)	(NA)	(NA)
Orleans (mineral industries only)	16	(NA)	(NA)	[5]1,526	([5])	(NA)	(NA)	(NA)	(NA)
Ouachita (mineral industries only)	22	(NA)	(NA)	[5]274	([5])	(NA)	(NA)	(NA)	(NA)
Plaquemines	25	(NA)	(NA)	[5]2,584	([5])	(NA)	(NA)	(NA)	(NA)
Pointe Coupee	5	(NA)	(NA)	[5]82	([5])	(NA)	(NA)	(NA)	(NA)
Rapides (mineral industries only), total	17	(NA)	(NA)	[5]139	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	10	(NA)	(NA)	[5]124	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids, Sand and gravel, and Clay, ceramic, and refractory minerals	7	944	(NA)	93	18	227	282	56	40
Red River	7	(NA)	(NA)	[5]24	([5])	(NA)	(NA)	(NA)	(NA)
Richland	22	(NA)	(NA)	[5]179	([5])	(NA)	(NA)	(NA)	(NA)
Sabine	9	(NA)	(NA)	[5]27	([5])	(NA)	(NA)	(NA)	(NA)
St. Charles	14	(NA)	(NA)	[5]742	([5])	(NA)	(NA)	(NA)	(NA)
St. James	5	(NA)	(NA)	[5]43	([5])	(NA)	(NA)	(NA)	(NA)
St. Landry, total	27	(NA)	(NA)	[5]184	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	23	(NA)	(NA)	[5]126	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	4	2,771	(NA)	51	7	116	273	46	5,412
St. Martin	38	(NA)	(NA)	[5]398	([5])	(NA)	(NA)	(NA)	(NA)
St. Mary	16	(NA)	(NA)	[5]659	([5])	(NA)	(NA)	(NA)	(NA)
St. Tammany (mineral industries only), total	8	(NA)	(NA)	[5]96	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	3	(NA)	(NA)	[5]39	([5])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	5	536	474	49	8	124	141	43	62
Tangipahoa (mineral industries only)	7	563	364	99	10	231	287	26	47
Tensas	15	(NA)	(NA)	[5]97	([5])	(NA)	(NA)	(NA)	(NA)
Terrebonne	18	(NA)	(NA)	[5]1,289	([5])	(NA)	(NA)	(NA)	(NA)
Union	25	(NA)	(NA)	[5]145	([5])	(NA)	(NA)	(NA)	(NA)
Vermilion	17	(NA)	(NA)	[5]311	([5])	(NA)	(NA)	(NA)	(NA)
Washington	6	1,019	805	61	7	155	211	24	108
Webster, total	37	(NA)	(NA)	[5]415	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	29	(NA)	(NA)	[5]153	([5])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	8	15,765	(NA)	217	45	525	858	179	536
West Baton Rouge	4	(NA)	(NA)	[5]141	([5])	(NA)	(NA)	(NA)	(NA)
West Feliciana	3	317	255	24	...	48	103	...	...
Winn	8	(NA)	(NA)	[5]118	([5])	(NA)	(NA)	(NA)	(NA)
Offshore operations	11	(NA)	(NA)	[5]932	([5])	(NA)	(NA)	(NA)	(NA)

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 1.
[2]See table 2, footnote 5.
[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by parish which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a parish represents the number of reports that indicated any operations in the specified parish.
[4]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by parish were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the parish data for the Crude petroleum and Natural gas industries.
[5]Figures for "All other employees" are included with those for "Production and development workers"
[6]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND PARISH: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Parish	All operations			Crude petroleum and natural gas extraction			
	Total	Classified in mineral industries[1]	Included in manufactures	Crude petroleum and natural gas[1]	Natural gas liquids		Oil and gas field contract services[2]
					Natural gasoline	Cycle condensates	
Louisiana, total.	[1]911	[1]895	16	[1]463	44	8	308
Acadia	50	50	...	45	4	...	
Allen	9	9	...	8	1	...	
Ascension	3	3	...	3	...	...	
Assumption	8	8	...	8	...	...	
Avoyelles	7	7	...	6	1	...	
Beauregard	25	25	...	20	2	...	
Bienville	10	9	1	9	...	...	
Bossier	42	42	...	39	1	2	
Caddo	186	185	1	177	7	...	
Calcasieu	40	40	...	38	1	...	
Caldwell	2	2	...	2	...	...	
Cameron	26	26	...	26	...	...	
Catahoula	11	11	...	9	...	...	
Claiborne	55	55	...	49	6	...	
Concordia	18	18	...	18	...	...	
De Soto	19	19	...	19	...	...	
East Baton Rouge	19	17	2	11	...	...	
East Carroll	2	2	...	...	...	...	
East Feliciana	2	2	...	...	...	...	
Evangeline	18	18	...	14	3	...	
Franklin	10	10	...	10	...	...	
Grant	7	7	...	5	...	...	
Iberia	21	21	...	17	...	...	
Iberville	18	18	...	18	...	...	
Jackson	1	1	...	1	...	...	
Jefferson	21	21	...	19	1	...	
Jefferson Davis	19	19	...	14	3	1	
Lafayette	23	22	1	22	...	...	
Lafourche	38	38	...	38	...	...	
La Salle	28	28	...	27	...	...	
Lincoln	20	19	1	15	3	...	
Livingston	3	3	...	3	...	...	(NA)
Madison	5	5	...	5	...	...	
Morehouse	6	6	...	5	...	...	
Natchitoches	6	5	1	4	...	...	
Orleans	18	16	2	16	...	...	
Ouachita	24	22	2	20	...	...	
Plaquemines	25	25	...	23	...	...	
Pointe Coupee	5	5	...	3	...	...	
Rapides	19	17	2	10	1	...	
Red River	7	7	...	7	...	...	
Richland	22	22	...	21	1	...	
Sabine	9	9	...	9	...	...	
St. Bernard	4	4	...	4	...	...	
St. Charles	14	14	...	13	1	...	
St. James	5	5	...	5	...	...	
St. John the Baptist	1	1	...	1	...	...	
St. Landry	27	27	...	23	3	1	
St. Martin	38	38	...	36	2	...	
St. Mary	16	16	...	15	...	1	
St. Tammany	10	8	2	3	...	...	
Tangipahoa	8	7	1	...	...	...	
Tensas	15	15	...	14	...	1	
Terrebonne	18	18	...	17	...	...	
Union	25	25	...	24	1	...	
Vermilion	17	17	...	16	...	1	
Washington	6	6	...	...	...	...	
Webster	37	37	...	29	2	1	
West Baton Rouge	4	4	...	4	...	...	
West Carroll	1	1	...	1	...	...	
West Feliciana	3	3	...	...	...	...	
Winn	8	8	...	6	...	...	
Offshore operations.	11	11	...	11	...	...	

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND PARISH: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Parish	Nonmetallic minerals (except fuels) mining									
	Crushed and broken limestone (included in manufactures)	Sand and gravel		Clay, ceramic, and refractory minerals			Chemical and fertilizer mineral mining			Gypsum
		Common sand and gravel	Glass sand	Bentonite	Clay, ceramic, and refractory minerals, n.e.c.		Rock salt	Sulfur	Chemical and fertilizer mineral mining, n.e.c.	
					Classified in mineral industries	Included in manufactures				
Louisiana, total.	2	55	1	2	4	14	4	4	1	1
Acadia	...	...	...	1	...	...	...	...	...	...
Allen	...	...	...	...	...	...	...	...	...	...
Ascension	...	...	...	...	...	...	...	...	...	...
Assumption	...	...	...	...	...	...	...	...	...	...
Avoyelles	...	...	...	...	...	...	...	...	...	...
Beauregard	...	2	1	...	...	...	...	...	...	...
Bienville	...	...	...	...	...	1	...	...	...	...
Bossier	...	...	...	...	...	...	...	...	...	...
Caddo	...	1	...	...	...	1	...	...	...	...
Calcasieu	...	...	...	...	...	...	...	1	...	...
Caldwell	...	...	...	...	...	...	...	...	...	...
Cameron	...	...	...	...	...	...	...	...	...	...
Catahoula	...	2	...	...	...	...	...	...	...	...
Claiborne	...	...	...	...	...	...	...	...	...	...
Concordia	...	...	...	...	...	...	...	...	...	...
De Soto	...	...	...	...	...	...	...	...	...	...
East Baton Rouge	1	5	...	...	...	1	...	...	1	...
East Carroll	...	2	...	...	...	...	...	...	...	...
East Feliciana	...	2	...	...	...	...	...	...	...	...
Evangeline	...	1	...	...	...	...	...	...	...	...
Franklin	...	...	...	...	...	...	...	...	...	...
Grant	...	2	...	...	...	...	...	...	...	...
Iberia	...	1	...	...	...	...	3	...	...	...
Iberville	...	...	...	...	...	...	...	...	...	...
Jackson	...	...	...	...	...	...	...	...	...	...
Jefferson	...	1	...	...	...	...	...	...	...	...
Jefferson Davis	...	1	...	...	...	...	...	...	...	...
Lafayette	...	...	...	...	...	1	...	...	...	...
Lafourche	...	...	...	...	...	...	...	...	...	...
La Salle	...	1	...	...	...	...	...	...	...	...
Lincoln	...	...	...	1	...	1	...	...	...	...
Livingston	...	...	...	...	...	...	...	...	...	...
Madison	...	...	...	...	...	...	...	...	...	...
Morehouse	...	1	...	...	...	...	...	...	...	...
Natchitoches	...	...	...	...	1	1	...	...	...	...
Orleans	1	...	...	...	...	1	...	...	...	...
Ouachita	...	2	...	...	...	2	...	...	...	...
Plaquemines	...	...	...	...	...	...	...	2	...	...
Pointe Coupee	...	...	...	...	2	...	...	...	...	...
Rapides	...	5	...	...	1	2	...	...	...	...
Red River	...	...	...	...	...	...	...	...	...	...
Richland	...	...	...	...	...	...	...	...	...	...
Sabine	...	...	...	...	...	...	...	...	...	...
St. Bernard	...	...	...	...	...	...	...	...	...	...
St. Charles	...	...	...	...	...	...	...	...	...	...
St. James	...	...	...	...	...	...	...	...	...	...
St. John the Baptist	...	...	...	...	...	...	...	...	...	...
St. Landry	...	...	...	...	...	...	...	...	...	...
St. Martin	...	...	...	...	...	...	...	...	...	...
St. Mary	...	...	...	...	...	...	...	...	...	...
St. Tammany	...	5	...	...	...	2	...	...	...	...
Tangipahoa	...	7	...	...	...	1	...	...	...	...
Tensas	...	...	...	...	...	...	...	...	...	...
Terrebonne	...	...	...	...	...	...	...	1	...	...
Union	...	...	...	...	...	...	...	...	...	...
Vermilion	...	...	...	...	...	...	...	...	...	...
Washington	...	6	...	...	...	...	...	...	...	...
Webster	...	5	...	...	...	...	...	...	...	...
West Baton Rouge	...	...	...	...	...	...	...	...	...	...
West Carroll	...	...	...	...	...	...	...	...	...	...
West Feliciana	...	3	...	...	...	...	...	...	...	...
Winn	...	...	...	...	...	...	1	...	...	1
Offshore operations.	...	...	...	...	...	...	...	...	...	...

[1]See table 3, footnote 3, and for parish figures, table 3, footnote 6.
[2]See table 3, footnote 4.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Louisiana, all mineral operations:												
Including operations classified in manufactures	911	82	275	117	151	160	62	41	8	11	4	...
Mineral industries only	895	81	269	114	147	159	61	41	8	11	4	...
Crude petroleum and natural gas extraction, total	823	80	250	108	132	144	52	37	6	10	4	...
Crude petroleum and natural gas	463	77	197	63	60	26	13	16	2	6	3	...
Natural gas liquids	52	...	5	8	19	16	3	1	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	134	...	10	10	28	51	16	12	4	2	1	...
Building, repairing, and dismantling rigs and derricks	18	...	5	6	1	5	1	...	...	...	...	...
Oil and gas field contract services, n.e.c	156	3	33	21	24	46	19	8	...	2	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	88	2	25	9	19	16	10	4	2	1	...	...
Mineral industries only	72	1	19	6	15	15	9	4	2	1	...	...
Crushed and broken limestone (included in manufactures and wholesale trade)	2	1	...	...	...	...	1	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	55	1	17	5	12	12	8	...	...	...	...	...
Glass sand	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	2	...	1	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	4	...	...	1	1	2	...	...	...	...	...	...
Included in manufactures	14	...	6	3	4	1	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Rock salt	4	...	...	...	...	...	1	2	1	...	...	...
Sulfur	4	...	...	...	...	...	...	2	1	1	...	...
Chemical and fertilizer mineral mining, n.e.c	1	...	...	...	1	...	...	...	...	...	...	...
Gypsum	1	...	...	...	...	1	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Million gallons per production worker[3]	Gallons per dollar value added	Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons): Used	Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Louisiana, total	29,474	984,473	42,345	1.44	43	61,686	2,017	...	95,122	(4)	53	37	10
Crude petroleum and natural gas extraction, total	26,538	[5]922,777	33,662	1.27	36	53,632	xxx	xxx	[6]80,792	(4)	53	42	5
Crude petroleum and natural gas	11,628	738,888	5,920	0.51	8	28,692	xxx	xxx	(NA)	(4)	17	68	[7]15
Natural gas liquids	1,010	([5])	26,415	26.15	(NA)	24,893	xxx	xxx	73,545	(4)	63	37	...
Oil and gas field contract services:													
Drilling oil and gas wells	8,079	96,696	1,275	0.16	13	37	xxx	xxx	(NA)	2	7	20	[7]71
Building, repairing, and dismantling rigs and derricks	266	2,192	20	0.08	9	10	xxx	xxx	(NA)	100	...	...	...
Oil and gas field contract services, n.e.c.	5,555	40,849	32	0.01	1	...	xxx	xxx	(NA)	25	13	...	[7]62
Nonmetallic minerals (except fuels) mining, total	2,936	61,696	8,683	2.96	140	8,054	2,017	...	14,330	1	48	24	27
Sand and gravel	1,007	7,363	2,789	2.77	379	2,702	2,017	...	8,268	...	37	1	62
Clay, ceramic, and refractory minerals, n.e.c.	79	1,061	11	0.14	10	10	...	...	11	...	...	91	9
Rock salt	704	10,113	2,112	3.00	209	2,032	...	...	2,285	...	...	69	31
Other industries	1,146	43,159	3,771	3.29	87	3,310	...	...	3,766	100	...	...	...

NA Not available.
xxx Not applicable.

[1]Excludes water used for flooding in oil and gas fields.

[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 4,017 million gallons of brackish water.

[3]For computations of water intake per production worker, including mine water used, see table 2.

[4]Less than 0.5 percent.

[5]See table 2, footnote 5.

[6]For industries other than Natural gas liquids, includes water intake only.

[7]Includes "not specified" as follows: for Crude petroleum and Natural gas, 9 percent; Drilling oil and gas wells, 41 percent; Oil and gas field contract services, n.e.c., 62 percent.

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MAINE

118-1

MINING IN MAINE: 1954

Rank among States:
Employment, 45
Value of shipments, 45

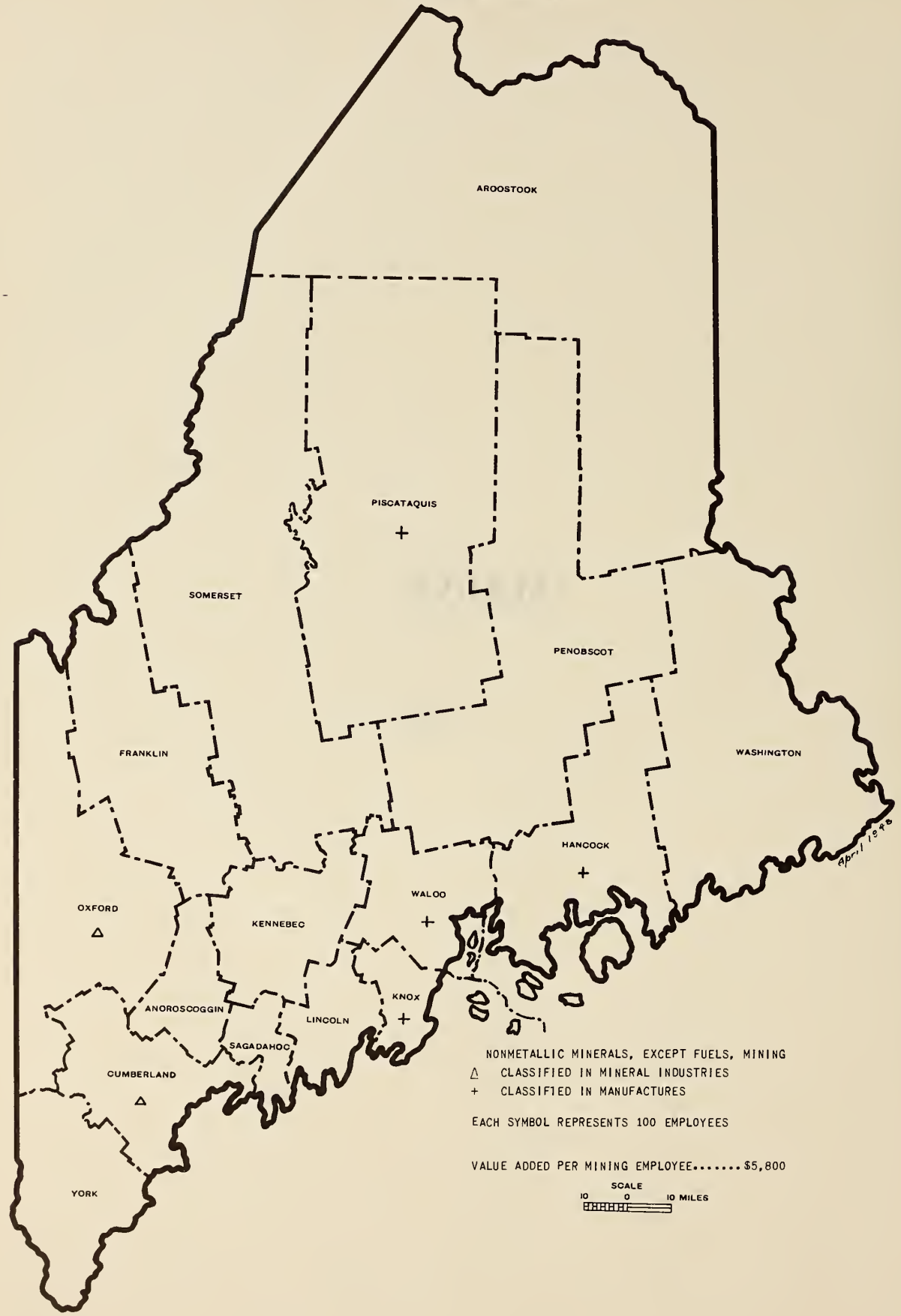


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale, and stone quarries operated as part of cement and lime plants					
	1954	1939[1]	1929[2]	1954	1939[1 3]	1929[4]	1919[5]	1909	1902[6]
Number of operating companies	73	33	(NA)	41	[7]30	(NA)	(NA)	[7]100	[7]141
Number of establishments	77	(NA)	52	42	(NA)	52	50	100	(NA)
Number of mines and quarries	76	34	56	41	31	56	51	105	135
Number of preparation plants	38	11	(NA)	24	8	(NA)	(NA)	(NA)	(NA)
Value of shipments[8] $1,000	5,242	1,279	3,468	3,472	1,218	3,468	1,823	2,056	3,656
Value added in mining ..... do	4,304	1,134	3,038	2,821	1,082	3,038	1,465	1,742	3,179
Number of persons engaged, total	747	439	1,284	572	424	1,284	1,093	2,387	3,892
Production and development workers	653	379	1,170	516	367	1,170	979	2,169	[9]3,684
All other employees	46	41	[10]85	33	40	[10]85	62	119	208
Proprietors and firm members	48	19	29	23	17	29	52	99	
Performing manual labor	33	10	(NA)	17	[1]8	(NA)	36	61	(NA)
Man-hours worked by production and development workers 1,000	1,330	659		1,046	631		(NA)	(NA)	
Principal expenses designated below, total $1,000	3,328	593	2,220	2,569	568	2,220	1,528	1,776	2,956
Wages of production and development workers ..... do	2,060	376	1,577	1,635	360	1,577	1,052	1,341	2,285
Salaries of all other employees ..... do	208	72	[10]213	173	72	[10]213	118	121	194
Minerals received for preparation ..... do	121	(NA)	(NA)	121	(NA)	(NA)	...	...	(NA)
Supplies ..... do	[11]636	83	267	424	78	267	203	221	
Purchased fuel ..... do	[11]129	27	53	84	24	53	78	86	477
Purchased electric energy ..... do	[11]83	33	102	75	32	102	45		
Contract work ..... do	[11]91	2	8	57	2	8	32	7	...
Purchased machinery installed ..... do	[12]327		55	218		55	(NA)		
Capital expenditures, total ..... do	[12]449	(NA)	(NA)	328	(NA)	(NA)			
Development and exploration of mineral property ..... do	[12]27		67	27		67	11	(NA)	(NA)
Preparation plant construction ..... do	[12]76			71	5				
Other construction ..... do	[12]10		(NA)	3					
New machinery and equipment ..... do	[12]253	9		144	7				
Used plant and equipment ..... do	[12]83	2		83	2				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[12]21	11	12	14	10	12	6	8	7
Per production worker	32	29	10	27	27	10	6	4	2
Prime movers 1,000	[12]17	5	3	11	5	3	3	8	7
Electric motors driven by purchased energy ..... do	[12]4	6	9	3	5	9	3	...	...
Horsepower rating of electric motors driven by energy generated at establishment ..... do	([13])	1	...	([13])	1	...	...	...	...
Energy used ..... million kwh equivalent	[12]46	16	59	37	15	59	(NA)		
Coal ..... 1,000 short tons	[12]1	1	7	1	1	7	10		
Fuel oils ..... 1,000 barrels	[12]9	2	...	7	2	...	...	(NA)	(NA)
Gas ..... million cu.ft	...	...	...	...	...	...	...		
Electric energy purchased ..... million kwh	[12]4	2	5	7	2	5	(NA)		
Electric energy generated and used ..... do	[12]1	...	...	1	...	...	(NA)		

NA Not available.

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing granite at such operations was $383,000; this value has been included in the value of shipments and value added in mining. The comparable value for slate is not available. Represents producing operations only. Excludes data for one nonproducing mine and one nonproducing preparation plant in the peat industry.

[2]Excludes data for common clay and shale and peat operations. There were 6 such mines in 1939, with products valued at less than $100,000.

[3]Includes data for limestone quarries operated as parts of cement and lime plants and for 2 common clay and shale mines.

[4]Includes data for 2 sand and gravel establishments.

[5]Excludes data for one nonproducing establishment.

[6]Includes data for lime plants producing lime valued at $742,000.

[7]Represents the sum of the number of operating companies in individual industries or available groups of industries. May include some duplication due to the same company operating in more than one industry.

[8]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[9]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[10]Excludes data for employees, if any, at central offices not included in reports for mining and mineral preparation establishments.

[11]Figures for fuels, electric energy, and contract work for crushed and broken stone and clay, ceramic, and refractory minerals classified in manufactures are included with figure for supplies.

[12]Excludes statistics for crushed stone and clay operations classified in manufactures.

[13]Less than one-half of the unit of measure specified.

Table 2.--DETAILED STATISTICS FOR MINERAL OPERATIONS, BY INDUSTRY GROUP AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION)

	Item	Maine, total		Dimension granite and slate (including operations classified in manufactures)	Crushed and broken stone (including operations classified in manufactures)		Sand and gravel	Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Peat	Metal mining, Chemical and fertilizer mineral mining, n.e.c., and Mica
		Including operations classified in manufactures	Mineral industries only		Limestone, granite, sandstone, and stone, n.e.c.	Sandstone only				
1	Number of operating companies	73	62	10	11	4	30	10	4	9
2	Number of establishments	77	66	10	11	4	32	10	4	10
	Number of mines and quarries:									
3	1954	76	65	10	11	4	32	11	4	8
4	1939	34	(NA)	10	6	...	3	10	4	1
5	Number of preparation plants	38	30	8	8	4	14	4	4	...
	Value of shipments:[1]									
6	1954.....$1,000	5,242	2,175	1,904	2,129	570	583	390	100	136
7	1939.....do	1,279	(NA)	[2]764	308	...	61	[2]40	26	[2]80
8	Value added in mining.....do	4,304	1,809	1,494	1,888	505	462	252	77	131
9	Number of persons engaged, total	747	356	323	211	90	104	55	33	21
10	Production and development workers	653	292	293	203	89	66	45	32	14
11	All other employees	46	22	24	5	1	13	3	1	...
12	Proprietors and firm members	48	42	6	3	...	25	7	...	7
13	Performing manual labor	33	29	4	3	...	16	7	...	3
	Man-hours worked by production and development workers:									
14	1954.....1,000	1,330	614	577	440	184	142	103	46	22
15	1939.....do	[3]659	(NA)	[2 3]316	185	...	28	[2]39	30	[2]61
	At mines:									
16	Underground.....do	49	7	45	...	...	...	...	...	4
17	Open-pit.....do	453	264	47	261	55	69	52	12	12
18	Surface (mine shops, yards, etc.).....do	61	10	51	...	...	...	...	10	...
19	At preparation plants.....do	767	333	434	179	129	73	51	24	6
20	Man-hours spent on development and exploration work (included above).....do	23	4	19	...	...	...	...	...	4
21	Principal expenses designated below, total.....$1,000	3,328	1,416	1,509	1,046	369	351	281	84	57
22	Wages of production and development workers.....do	2,060	861	960	714	289	183	121	49	33
23	Salaries of all other employees.....do	208	69	139	16	3	35	15	1	2
24	Minerals received for preparation.....do	121	10	111	...	...	...	10	...	...
25	Supplies.....do	[4]636	252	218		52	46		32	11
	Purchased fuel:									
26	Coal.....do	[5]12	1	11		...	...		...	...
27	Fuel oil.....do	[5]45	29	17	316	7	8	135	1	1
28	Gas.....do	...	...	...		...	...		...	...
29	Other fuels.....do	[5]72	62	11		7	37		1	4
30	Purchased electric energy.....do	[4]83	41	42		6	8		...	...
31	Contract work.....do	[4]91	91	...		5	34		...	6
32	Purchased machinery installed.....do	[5]327	239	90		41	109		9	2
33	Capital expenditures, total.....do	[5]449	359	90		53	121		20	19
34	Development and exploration of mineral property.....do	[5]27	27	...		...	...		...	17
35	Preparation plant construction.....do	[5]76	70	6		20	5		11	...
36	Other construction.....do	[5]10	8	2		...	7		...	...
37	New machinery and equipment.....do	[5]253	210	43		26	109		9	...
38	Used plant and equipment.....do	[5]83	44	39		7	...		...	2
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	[5]21	18	3		4	7		1	1
40	Per production worker	32	62	17		41	99		24	71
41	Prime movers.....1,000	[5]17	15	2	(NA)	3	6	(NA)	1	1
42	Electric motors driven by purchased energy.....do	[5]4	3	1		1	1		(6)	(6)
43	Horsepower rating of electric motors driven by energy generated at establishment.....do	(6)	...	(6)		...	(6)		...	...
44	Energy used.....million kwh equivalent	[5]46	34	18		3	13		...	1
45	Coal.....1,000 short tons	[5]1	(6)	1		...	...		...	...
46	Fuel oil.....1,000 barrels	[5]9	7	3		1	2		(6)	(6)
47	Gas.....million cu.ft	...	...	...		...	...		...	...
48	Electric energy purchased.....million kwh	[5]4	6	2		(6)	(6)		...	(6)
49	Electric energy generated and used.....do	[5]1	...	1		...	...		...	...
50	Water intake, including mine water used.....million gallons	[5]139	99	40		...	90		...	...
51	Per production worker.....do	0.21	0.34	0.15		...	1.36		...	...

NA Not available.

[1]See table 1, footnote 8.

[2]Figures for 2 dimension slate operations and 2 common clay and shale mines are included with those for 1 mica mine.

[3]See table 1, footnote 1.

[4]See table 1, footnote 11.

[5]See table 1, footnote 12.

[6]See table 1, footnote 13.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Maine, all mineral operations:									
Including operations in manufactures	77	5,242	4,304	653	46	1,330	2,060	208	[2]366
Mineral industries only	66	2,175	1,809	292	22	614	861	69	315
Dimension stone (including operations in manufactures)	10	1,904	1,494	293	24	577	960	139	51
Crushed and broken stone (including operations in manufactures)	11	2,699	2,393	292	6	624	1,003	19	(NA)
Sand and gravel	32	583	462	66	13	142	183	35	121
Clay, ceramic, and refractory minerals (including operations in manufactures)	10	390	252	45	3	103	121	15	(NA)
Metal mining, Chemical and fertilizer mineral mining, and Miscellaneous nonmetallic minerals (except fuels)	14	236	208	46	1	68	82	3	37
COUNTY									
Androscoggin (mineral industries only)	11	328	275	24	...	55	78	...	47
Sand and gravel	8	312	261	22	...	53	76	...	47
Cumberland	7	485	396	75	10	148	235	31	...
Knox (including operations in manufactures)	5	1,388	1,194	[3]115	([3])	228	[3]238	([3])	[2]4
Oxford	12	427	332	49	3	108	132	14	37
Penobscot	4	109	100	20	...	51	72	...	12

NA Not available.

[1]See table 1, footnote 8.

[2]See table 1, footnote 12.

[3]Figures for "All other employees" have been included with those for "Production and development workers."

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All industries			Metal mining (beryllium ores)	Nonmetallic minerals (except fuels) mining					
					Dimension stone		Slate (included in manufactures)	Crushed and broken stone		
					Granite			Limestone		
	Total	Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in manufactures	
									Cement	Lime
Maine, total....	77	66	11	1	2	7	1	1	1	1
Androscoggin.....	12	11	1	...	...	...	...	...	...	...
Aroostook.....	4	4	...	...	...	...	...	...	...	...
Cumberland.....	7	7	...	...	...	...	...	...	...	...
Franklin.....	3	3	...	...	...	...	...	...	...	...
Hancock.....	7	4	3	...	1	3	...	...	...	...
Kennebec.....	1	1	...	...	...	...	...	...	...	...
Knox.....	5	2	3	...	...	1	...	1	1	1
Lincoln.....	1	1	...	...	...	...	...	...	...	...
Oxford.....	12	12	...	1	...	...	...	...	...	...
Penobscot.....	4	4	...	...	...	...	...	...	...	...
Piscataquis.....	1	...	1	...	...	...	1	...	...	...
Sagadahoc.....	6	6	...	...	...	...	...	...	...	...
Somerset.....	3	3	...	...	...	...	...	...	...	...
Waldo.....	3	1	2	...	...	2	...	...	...	...
Washington.....	6	6	...	...	1	...	...	...	...	...
York.....	2	1	1	...	...	1	...	...	...	...

County	Crushed and broken stone—Continued			Sand and gravel	Clay, ceramic, and refractory minerals, n.e.c.			Chemical and fertilizer mineral mining, n.e.c.	Miscellaneous nonmetallic minerals	
	Granite	Sandstone	Stone, n.e.c.		Feldspar	Classified in mineral industries	Included in manufactures		Mica	Peat
Maine, total....	3	4	1	32	6	3	1	1	8	4
Androscoggin.....	...	...	...	8	...	2	1	...	1	...
Aroostook.....	...	...	...	4	...	...	...	...	...	...
Cumberland.....	...	2	...	3	...	1	...	...	1	...
Franklin.....	...	...	1	2	...	...	...	...	...	...
Hancock.....	1	...	...	1	...	...	...	...	...	1
Kennebec.....	1	...	...	...	...	...	...	...	...	...
Knox.....	...	...	...	1	...	...	...	...	...	...
Lincoln.....	...	...	...	1	...	...	...	...	...	...
Oxford.....	...	...	...	3	1	...	...	1	6	...
Penobscot.....	...	1	...	3	...	...	...	...	...	...
Piscataquis.....	...	...	...	...	...	...	...	...	...	...
Sagadahoc.....	...	...	...	1	5	...	...	...	...	...
Somerset.....	...	1	...	2	...	...	...	...	...	...
Waldo.....	...	...	...	1	...	...	...	...	...	...
Washington.....	...	...	...	2	...	...	...	...	...	3
York.....	1	...	...	...	...	...	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Maine, all mineral operations:												
Including operations classified in manufactures	77	16	39	5	7	7	2	1	...	...	...	...
Mineral industries only	66	15	36	5	7	2	1	...	...	...	...	...
Metal mining (beryllium ores)	1	...	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	76	16	38	5	7	7	2	1	...	...	...	...
Mineral industries only	65	15	35	5	7	2	1	...	...	...	...	...
Dimension stone:												
Granite:												
Classified in mineral industries	2	...	2	...	...	...	...	...	...	...	...	...
Included in manufactures	7	1	2	...	...	3	1	...	...	...	...	...
Slate (included in manufactures)	1	...	...	...	...	...	...	1	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	1	...	...	...	1	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	2	...	...	...	...	...	...
Granite	3	...	2	...	...	1	...	...	...	...	...	...
Sandstone	4	...	...	2	1	...	1	...	...	...	...	...
Stone, n.e.c	1	...	...	1	...	...	...	...	...	...	...	...
Sand and gravel	32	10	19	...	3	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Feldspar	6	2	2	1	...	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c:												
Classified in mineral industries	3	...	3	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	1	...	1	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Mica	8	3	5	...	...	...	...	...	...	...	...	...
Peat	4	...	1	1	2	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Maine, total	292	1,809	99	0.34	55	99	...	...	139	...	91	7	2
Crushed and broken sandstone	89	505	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	66	462	90	1.36	195	90	...	...	130	...	90	8	[1]2
Peat	32	77	...	...	...	...	...	...	...	...	...	...	...
All other industries	105	765	9	0.09	12	9	...	...	9	...	100	...	...

[1]Represents "not specified."

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DELAWARE, MARYLAND, AND DISTRICT OF COLUMBIA

119-1

MINING IN DELAWARE: 1954

Rank among States:
Employment, 48
Value of shipments, 48



Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement and lime establishments.					
	1954	1939[1]	1929[2]	1954	1939[3]	1929[4]	1919	1909	1902[5]
Number of operating companies	193	[6]156	(NA)	128	[6]119	(NA)	(NA)	[6]135	[6]240
Number of establishments	216	(NA)	112	130	(NA)	102	136	140	(NA)
Number of mines and quarries	207	180	130	41	132	119	172	182	217
Number of oil and gas wells producing at end of year	26	...	(NA)	26	...	(NA)	...	...	...
Number of preparation plants	73	65	(NA)	23	30	(NA)	(NA)	(NA)	(NA)
Value of shipments[7]...$1,000	27,145	8,707	11,122	11,640	4,858	7,341	9,958	6,298	7,612
Value added in mining...do	20,572	7,243	8,134	8,696	4,021	6,050	8,394	5,522	6,761
Number of persons engaged, total	2,352	3,970	4,978	1,216	3,181	4,269	6,261	8,242	7,565
Production and development workers	1,944	3,599	4,578	991	2,871	3,987	5,756	7,743	[8]7,160
All other employees	227	251	[9]355	91	203	[9]240	416	389	405
Proprietors and firm members	181	120	45	134	107	42	89	110	(NA)
Performing manual labor	106	69	(NA)	77	67	(NA)	27	52	(NA)
Man-hours worked by production and development workers...1,000	4,374	6,090	(NA)	1,982	(NA)	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	13,889	5,401	8,655	6,557	3,882	5,935	8,669	4,731	5,799
Wages of production and development workers...do	6,604	3,417	4,816	3,187	2,668	4,125	6,295	3,557	4,472
Salaries of all other employees...do	995	520	[9]851	398	377	[9]519	810	398	476
Minerals received for preparation...do	...	(NA)	(NA)	...	(NA)	(NA)	...	...	(NA)
Supplies...do	[10]4,060	877	2,377	2,138	561	955	1,214	631	
Purchased fuel...do	[10]1,116	312	276	369	111	84	269	131	843
Purchased electric energy...do	[10]378	216	335	186	137	252	61		
Contract work...do	[10]736	59	([11])	279	28	([11])	20	14	8
Purchased machinery installed...do	[12]2,195		458	967		251	(NA)		
Capital expenditures, total...do	[12]1,912	(NA)	(NA)	995		(NA)	(NA)		
Development and exploration of mineral property...do	[12]303		115	279		115	192	(NA)	(NA)
Preparation plant construction...do	[12]74	81		32					
Other construction...do	[12]140		(NA)	103		(NA)	(NA)		
New machinery and equipment...do	[12]1,260	603		496					
Used plant and equipment...do	[12]135	20		85					
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	[12]124	42	34	53		24	19	20	16
Per production worker	64	12	7	53	(NA)	6	3	3	2
Prime movers...1,000	[12]102	23	13	41		7	15	19	16
Electric motors driven by purchased energy...do	[12]22	19	21	12		17	4	1	([11])
Horsepower rating of electric motors driven by energy generated at establishment...do	([11])	9	2	([11])		2	4	1	([11])
Energy used...million kwh equivalent	[12]410	388	472	[12]280		203	(NA)		
Coal...1,000 short tons	[12]17	37	55	7		24	70		
Fuel oils...1,000 barrels	[12]105	32	16	38		2	...	(NA)	(NA)
Gas...million cu.ft	[12]98	1	1	98		1	...		
Electric energy purchased...million kwh	[12]16	11	17	7		13	(NA)		
Electric energy generated and used...do	...	7	1	...		1	(NA)		

NA Not available.

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing sandstone at such operations was $1,000; this value has been included in the value of shipments and value added in mining. The comparable value for granite is not available.

[2]Represents Maryland only. For 1929, only 5 establishments with a total of 104 production and development workers were reported for Delaware and the District of Columbia. Excludes data for common clay and shale operations. There were 13 such mines in Maryland in 1939 with products valued at $168,000.

[3]Includes data for one common clay or shale mine in Delaware and for one or more limestone quarries operated as part of cement plants in Maryland.

[4]Includes data for 3 stone quarries operated as part of cement and lime establishments. See also footnote 2.

[5]Represents producing operations only. Excludes data for 2 nonproducing establishments. Includes data for lime plants producing lime valued at $326,000.

[6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. For all other years the figures represent net production and exclude this duplication.

[8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

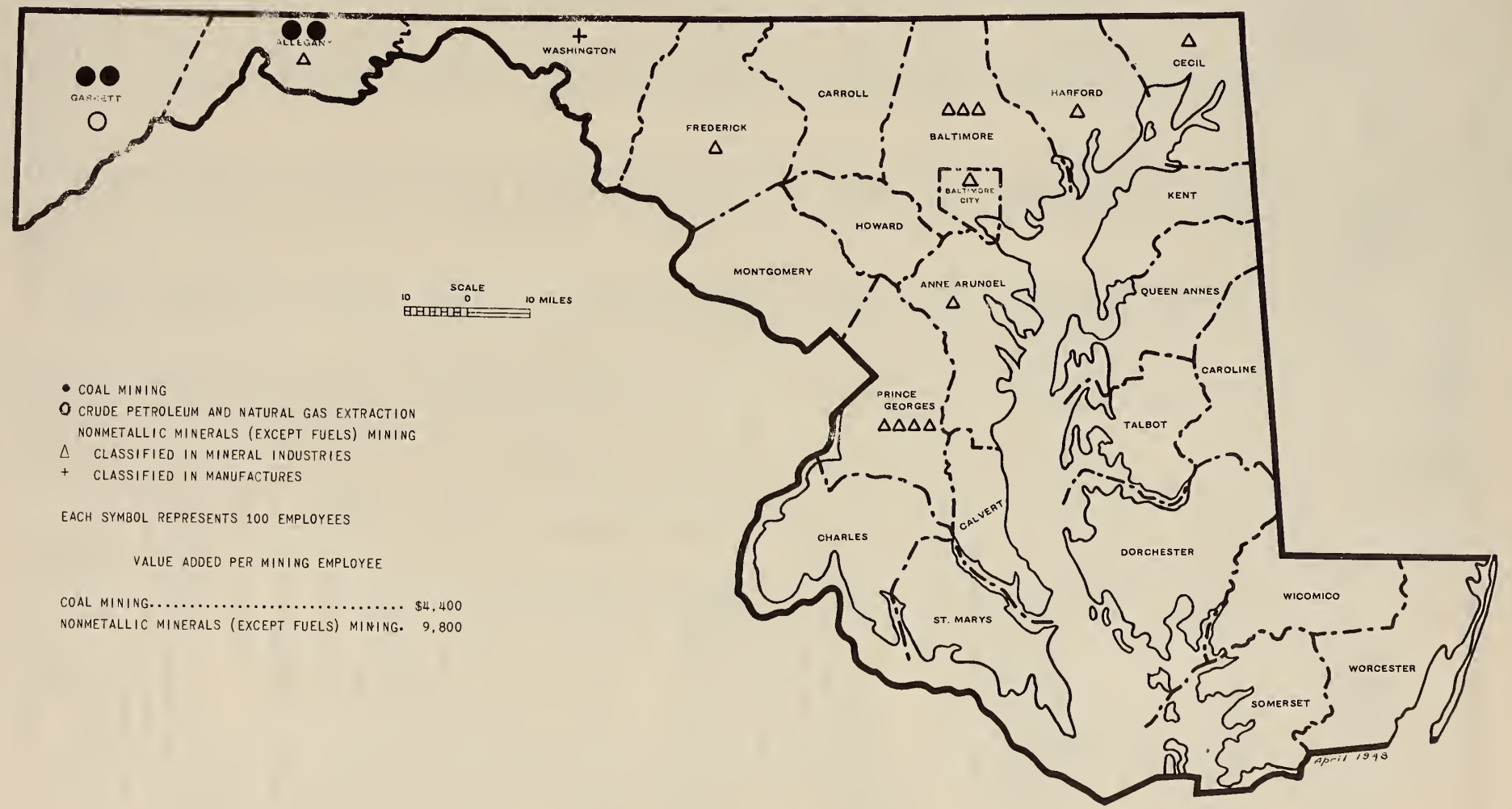
[10]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[11]Less than one-half of the unit of measure specified.

[12]Excludes statistics for crushed stone and clay operations classified in manufactures.

MINING IN MARYLAND: 1954

Rank among States:
Employment, 37
Value of shipments, 39



● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

COAL MINING	$4,400
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	9,800

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Delaware, Maryland, and District of Columbia		Metal mining and Curde petroleum and natural gas extraction	Bituminous coal	Nonmetallic minerals (except fuels) mining		
		Total	Mineral industries only			Total		Dimension stone (including operations in manufactures)
						Including operations classified in manufactures	Mineral industries only	
1	Number of operating companies	193	175	11	77	105	87	11
2	Number of establishments	216	196	11	79	126	106	11
	Number of mines, quarries, and producing oil and gas wells:							
3	1954	233	212	27	80	126	105	11
4	1939	180	(NA)	...	83	97	(NA)	8
5	Number of preparation plants	73	73	...	...	73	73	1
	Value of shipments:[1]							
6	1954 ..... $1,000	27,145	24,142	559	2,119	24,467	21,464	286
7	1939 ..... do	8,707	(NA)	...	2,978	5,729	(NA)	[2]105
8	Value added in mining ..... do	20,572	17,941	551	1,631	18,390	15,759	233
9	Number of persons engaged, total	2,352	2,210	87	455	1,810	1,668	76
10	Production and development workers	1,944	1,804	51	352	1,541	1,401	58
11	All other employees	227	227	9	19	199	199	5
12	Proprietors and firm members	181	179	27	84	70	68	13
13	Performing manual labor	106	106	4	66	36	36	4
	Man-hours worked by production and development workers:							
14	1954 1,000	4,374	4,098	89	562	3,723	3,447	114
15	1939 ..... do	6,090	(NA)	...	2,967	3,123	(NA)	[2]178
	At mines:							
16	Underground ..... do	382	382	xxx	372	10	10	...
17	Open-pits ..... do	2,116	1,840	xxx	132	1,984	1,708	114
18	Surface (mine shops, yards, etc.) ..... do	96	96	xxx	58	38	38	...
19	At preparation plants ..... do	1,691	1,691	xxx	...	1,691	1,691	...
20	At oil and gas field operations ..... do	89	89	89	xxx	...	xxx	...
21	Man-hours spent on development and exploration work (included above) ..... do	78	78	66	7	5	5	...
22	Principal expenses designated below, total $1,000	13,889	13,048	395	1,535	11,959	11,118	222
23	Wages of production and development workers ..... do	6,604	6,135	150	1,003	5,451	4,982	168
24	Salaries of all other employees ..... do	995	995	10	70	915	915	10
25	Minerals received for preparation ..... do	...	...		...	...	...	...
26	Supplies ..... do	[5]4,060	3,689	137	331	[5]3,592	3,221	29
	Purchased fuel:							
27	Coal ..... do	[5]158	158	(7)	4	[5]154	154	...
28	Fuel oils ..... do	[5]446	446	(7)	43	[5]403	403	...
29	Gas ..... do	[5]34	34	4	...	[5]30	30	...
30	Other fuels ..... do	[5]478	477	6	33	[5]439	438	10
31	Purchased electric energy ..... do	[5]378	378	...	23	[5]355	355	1
32	Contract work ..... do	[5]736	736	88	28	[5]620	620	4
33	Purchased machinery installed ..... do	[6]2,195	2,195	168	171	[6]1,856	1,856	30
34	Capital expenditures, total ..... do	[6]1,912	1,912	395	145	[6]1,372	1,372	21
35	Development and exploration of mineral property ..... do	[6]303	303	164	8	[6]131	131	...
36	Preparation plant construction ..... do	[6]74	74	...	...	[6]74	74	...
37	Other construction ..... do	[6]140	140	85	...	[6]55	55	...
38	New machinery and equipment ..... do	[6]1,260	1,260	111	102	[6]1,047	1,047	21
39	Used plant and equipment ..... do	[6]135	135	35	35	[6]65	65	...
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[6]124	124	2	16	[6]106	106	2
41	Per production worker	64	68	39	45	68	75	34
42	Prime movers 1,000	[6]102	102	2	13	[6]87	87	2
43	Electric motors driven by purchased energy ..... do	[6]22	22	...	3	[6]19	19	(7)
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	(7)	(7)	...	(7)	(7)	(7)	...
45	Energy used ..... million kwh equivalent	[6]410	410	2	32	[6]376	376	4
	Purchased fuel:							
46	Coal ..... 1,000 short tons	[6]17	17	(7)	1	[6]16	16	...
47	Fuel oil ..... 1,000 barrels	[6]105	105	(7)	9	[6]96	96	...
48	Gas ..... million cu.ft	[6]98	98	8	...	[6]90	90	...
49	Electric energy purchased ..... million kwh	[6]16	16	...	1	[6]15	15	1
50	Electric energy generated and used ..... do	...	...	...	...	...	...	...
51	Water intake, including mine water used ..... million gallons	[6]4,086	4,086	2	...	[6]4,084	4,084	...
52	Per production worker ..... do	2.10	2.26	0.04	...	2.65	2.92	...

NA Not available. xxx Not applicable. [1]See table 1, footnote 7. [2]Data for 1 dimension granite quarry and 2 clay pits in Delaware are included with those for crushed and broken granite, slate, and marble. [3]Figures for one crushed and broken marble quarry, one crushed and broken Slate quarry, and 2 kaolin and ball clay quarries are included with those for miscellaneous nonmetallic minerals (except fuels) industries. [4]Includes man-hours worked on floating equipment. [5]See table 1, footnote 10. [6]See table 1, footnote 12. [7]Less than one-half of the unit of measure specified.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued								
Crushed and broken stone				Sand and gravel		Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Miscellaneous nonmetallic minerals (except fuels)	
Limestone		Trap rock	Granite, Slate, and Marble	Delaware	Maryland			
Including operations classified in manufactures	Mineral industries only							
15	10	5	5	7	49	17	4	1
15	10	5	5	9	59	18	4	2
15	10	5	5	9	59	18	4	3
12	(NA)	6	11	4	28	23	5	4
10	10	5	4	6	44		3	5
7,786	5,611	1,510	885	770	11,862	1,121	247	6
764	(NA)	281	[2] [3]334	75	3,375	[2] [3]340	[3]455	7
5,679	3,807	1,244	707	566	8,799	1,003	159	8
397	314	90	116	59	965	74	33	9
362	279	81	103	43	798	70	26	10
31	31	6	12	7	129	2	7	11
4	4	3	1	9	38	2	...	12
2	2	...	...	6	23	1	...	13
865	699	175	197	91	2,077	141	65	14
454	(NA)	207	[2] [3]283	45	1,379	[2] [3]328	[3]249	15
...	...	...	10	...	...	...	...	16
470	304	95	76	54	[4]1,013	133	31	17
3	3	11	11	(NA)	(NA)	...	13	18
392	392	69	100	37	1,064	8	21	19
...	...	...	...	...	...	...	...	20
...	...	...	...	...	5	...	...	21
3,459	2,887	564	562	375	6,220	368	189	22
1,302	1,033	284	331	146	2,895	245	80	23
182	182	35	65	29	568	6	20	24
...	...	...	...	(NA)	(NA)	...	...	25
	1,313	156	74	19	1,543	[5]96	59	26
	30	...	1	...	123	(7)	...	27
1,975	53	22	14	20	279	[5]7	8	28
	30	...	...	...	...	...	...	29
	57	23	13	28	297	[5]3	8	30
	73	41	32	8	183	[5]7	10	31
	116	3	32	125	332	[5]4	4	32
	500	35	57	114	1,113	[6]1	6	33
	368	14	45	110	807	...	7	34
	106	...	...	21	3	...	1	35
	32	...	...	6	36	...	...	36
	...	5	13	...	37	...	...	37
	219	9	28	70	694	...	6	38
	11	...	4	13	37	...	...	39
	15	11	5	9	62	[6]1	1	40
	53	135	48	209	77	14	38	41
	10	8	4	9	52	[6]1	1	42
(NA)	5	3	1	(7)	10	(7)	(5)	43
	(7)	...	...	...	...	...	...	44
	113	30	9	14	191	[6]3	12	45
	6	...	(7)	...	10	(7)	...	46
	12	7	3	4	63	1	6	47
	90	...	...	...	...	...	...	48
	2	2	1	(7)	9	(7)	(7)	49
	...	...	...	...	...	...	...	50
	1	1	4	314	3,764	...	...	51
	(7)	0.01	0.04	7.30	4.72	...	...	52

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Delaware, Maryland, and the District of Columbia, all mineral operations:									
Including operations in manufactures	216	27,145	20,572	1,944	227	4,374	6,604	995	[2]1,777
Mineral industries only	196	24,142	17,941	1,804	227	4,098	6,135	995	1,777
Metal mining and Crude petroleum and natural gas extraction[3]	11	559	551	51	9	89	150	10	360
Bituminous coal	79	2,119	1,631	352	19	562	1,003	70	110
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	126	24,467	18,390	1,541	199	3,723	5,451	915	[2]1,307
Mineral industries only	106	21,464	15,759	1,401	199	3,447	4,982	915	1,307
Dimension stone (including operations in manufactures)	11	286	233	58	5	114	168	10	21
Crushed and broken stone:									
Including operations in manufactures	25	10,181	7,630	546	49	1,237	1,917	282	(NA)
Mineral industries only	20	8,006	5,758	463	49	1,071	1,648	282	412
Sand and gravel:									
Delaware	9	770	566	43	7	91	146	29	97
Maryland	59	11,862	8,799	798	129	2,077	2,895	568	770
Clay, ceramic, and refractory minerals (including operations in manufactures)	18	1,121	1,003	70	2	141	245	6	...
Miscellaneous nonmetallic minerals (except fuels)	4	247	159	26	7	65	80	20	7
DELAWARE									
New Castle (mineral industries only)	5	818	636	44	6	107	172	38	37
Sussex	3	57	20	8	4	17	26	9	58
MARYLAND									
Allegany (mineral industries only)	50	(NA)	(NA)	[4]212	(4)	(NA)	(NA)	(NA)	(NA)
Bituminous coal	45	945	757	161	10	256	437	33	91
Anne Arundel	4	(D)	(D)	74	6	(D)	(D)	(D)	(D)
Baltimore City	4	(D)	(D)	60	37	(D)	(D)	(D)	(D)
Baltimore (mineral industries only), total	17	5,891	4,931	305	25	794	1,257	100	289
Dimension stone	4	213	175	42	3	88	132	7	21
Crushed and broken stone	6	3,317	2,765	167	8	442	692	47	230
Sand and gravel and Clay, ceramic, and refractory minerals	7	2,361	1,991	96	12	264	433	35	38
Cecil	9	1,028	543	75	8	183	281	32	57
Garrett	39	(NA)	(NA)	[4]229	(4)	(NA)	(NA)	(NA)	(NA)
Bituminous coal	34	1,174	874	191	9	306	566	37	19
Harford	16	1,549	1,396	125	23	264	397	101	94
Sand and gravel	12	885	833	55	11	126	179	49	75
Howard	5	146	123	3	1	5	6	2	131
Montgomery	7	(NA)	(NA)	[4]26	(4)	(NA)	(NA)	(NA)	(NA)
Dimension stone	4	53	41	11	2	19	27	3	...
Prince Georges (mineral industries only)	13	4,439	3,068	373	63	1,048	1,387	217	342

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 7.
[2]See table 1, footnote 12.
[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.
[4]Figures for "All other employees" are included with those for "Production and development workers."

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry	Delaware				Maryland								
	Total	Kent	New Castle	Sussex	Total	Allegany	Anne Arundel	Baltimore City	Baltimore	Calvert	Carroll	Cecil	Charles
All operations, total	12	3	6	3	202	52	4	5	20	1	3	9	1
Classified in mineral industries	10	2	5	3	185	50	4	4	17	1	1	9	1
Included in manufactures	2	1	1	...	17	2	...	1	3	...	2	...	...
Metal mining (lead and zinc ores)	...	...	...	...	1	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	...	79	45	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:[1]													
Crude petroleum and natural gas	...	...	...	...	7	1	...	...	...	...	...	...	...
Drilling oil and gas wells contract services	...	...	...	...	3	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:													
Dimension stone:													
Limestone	...	...	...	...	2	...	...	...	...	...	...	...	...
Granite	...	...	...	...	2	...	...	...	2	...	...	...	...
Sandstone	...	...	...	...	2	...	...	...	2	...	...	...	...
Stone, n.e.c.:													
Classified in mineral industries	...	...	...	...	4	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	1	...	...	...	1	...	...	...	...
Crushed and broken stone:													
Limestone:													
Classified in mineral industries	...	...	...	...	10	1	...	...	3	...	...	...	...
Included in manufactures	...	...	...	...	5	...	...	...	...	...	1	...	...
Granite	1	...	1	...	2	...	...	1	...	...	...	1	...
Slate	...	...	...	...	1	...	...	...	...	...	...	...	...
Marble	...	...	...	...	1	...	...	...	...	...	...	...	...
Trap rock	...	...	...	...	5	...	...	1	3	...	...	...	...
Sand and gravel:													
Common sand and gravel	9	2	4	3	57	2	3	2	6	...	...	8	1
Glass sand	...	...	...	...	1	1	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:													
Fire clay:													
Classified in mineral industries	...	...	...	...	3	...	1	...	1	...	...	...	...
Included in manufactures	...	...	...	...	2	2	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	2	1	1	...	9	...	...	1	2	...	1	...	...
Miscellaneous nonmetallic minerals (except fuels):													
Mica	...	...	...	...	1	...	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	...	...	...	...	2	...	...	...	...	...	1	...	...
Nonmetallic minerals, n.e.c.	...	...	...	...	1	...	...	...	...	1	...	...	...

See footnote at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry group and industry	Maryland—Continued													District of Columbia
	Dorchester	Frederick	Garrett	Harford	Howard	Kent	Montgomery	Prince Georges	Queen Annes	St. Marys	Washington	Wicomico	Worcester	
All operations, total	1	6	39	16	5	3	7	15	1	1	4	3	1	2
Classified in mineral industries	1	3	39	16	5	2	7	13	1	1	2	2	1	1
Included in manufactures	...	3	...	...	...	1	...	2	...	...	2	1	...	1
Metal mining (lead and zinc ores)	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	34	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:[1]														
Crude petroleum and natural gas	...	...	3	...	...	...	1	...	...	...	...	...	...	...
Drilling oil and gas wells contract services	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:														
Dimension stone:														
Limestone	...	...	...	...	1	...	1	...	...	...	...	...	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.:														
Classified in mineral industries	...	...	...	...	1	...	3	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:														
Limestone:														
Classified in mineral industries	...	2	1	...	1	...	...	...	...	...	2	...	...	...
Included in manufactures	...	3	...	...	...	...	...	...	...	...	1	...	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Slate	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Marble	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Trap rock	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Sand and gravel:														
Common sand and gravel	1	...	1	12	1	2	2	12	1	1	...	1	1	...
Glass sand	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Clay, ceramic, and refractory minerals, n.e.c.:														
Fire clay:														
Classified in mineral industries	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:														
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Included in manufactures	...	...	...	...	...	1	...	2	...	...	1	1	...	1
Miscellaneous nonmetallic minerals (except fuels):														
Mica	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...	...

NA Not available. [1]See table 3, footnote 3.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

State, industry group, and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Delaware, Maryland, and District of Columbia, all mineral operations:												
Including operations classified in manufactures	216	23	89	41	31	27	3	2	...	...	...	...
Mineral industries only	196	23	78	37	28	26	2	2	...	...	...	...
DELAWARE												
All mineral operations (nonmetallic minerals (except fuels) mining):												
Including operations classified in manufactures	12	2	5	3	1	1	...	...	...	...	...	...
Mineral industries only	10	2	3	3	1	1	...	...	...	...	...	...
Crushed and broken granite	1	...	...	...	...	1	...	...	...	...	...	...
Sand and gravel	9	2	3	3	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	2	...	2	...	...	...	...	...	...	...	...	...
MARYLAND												
All mineral operations:												
Including operations classified in manufactures	202	21	82	38	30	26	3	2	...	...	...	...
Mineral industries only	185	21	74	34	27	25	2	2	...	...	...	...
Metal mining (lead and zinc ores)	1	1	...	...	...	...	...	...	...	...	...	...
Bituminous coal	79	11	41	16	8	3	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	10	2	4	2	1	1	...	...	...	...	...	...
Crude petroleum and natural gas	7	2	2	2	1	...	...	...	...	...	...	...
Drilling oil and gas wells contract services	3	...	2	...	...	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	112	7	37	20	21	22	3	2	...	...	...	...
Mineral industries only	95	7	29	16	18	21	2	2	...	...	...	...
Dimension stone:												
Limestone	2	1	1	...	...	...	...	...	...	...	...	...
Granite	2	...	...	1	1	...	...	...	...	...	...	...
Sandstone	2	...	...	1	1	...	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	4	1	2	1	...	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	10	...	2	1	3	2	1	1	...	...	...	...
Included in manufactures	5	...	1	1	1	1	1	...	...	...	...	...
Granite	2	...	...	...	1	1	...	...	...	...	...	...
Slate	1	...	...	1	...	...	...	...	...	...	...	...
Marble	1	...	...	...	...	1	...	...	...	...	...	...
Trap rock	5	...	...	2	...	3	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	57	3	21	9	9	13	1	1	...	...	...	...
Glass sand	1	...	...	...	...	1	...	...	...	...	...	...
Foundry sand	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	3	1	1	...	1	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	2	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	9	...	6	3	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Mica	1	1	...	...	...	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	2	...	...	...	2	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c	1	...	1	...	...	...	...	...	...	...	...	...
DISTRICT OF COLUMBIA												
All mineral operations (nonmetallic minerals (except fuels) mining):												
Including operations classified in manufactures	2	...	2	...	...	...	...	...	...	...	...	...
Mineral industries only	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Delaware, Maryland, and the District of Columbia, total.	1,804	17,941	3,977	2.20	222	3,931	109	201	4,595	33	16	32	19
Metal mining and Crude petroleum and natural gas extraction.....	51	551	2	0.04	.4	...	...	...	2	...	100	...	...
Bituminous coal.....	352	1,631	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total.....	1,401	15,759	3,975	2.84	252	3,931	109	201	4,593	33	16	32	19
Crushed and broken stone:													
Limestone.....	279	3,807	1	(2)	(2)	1	...	...	1	...	...	100	...
Trap rock.....	81	1,244	1	0.01	1	1	...	...	1	100	...	...	...
Granite, Slate and Marble.....	103	707	4	0.04	6	3	...	2	4	75	25	...	...
Sand and gravel:													
Delaware.....	43	566	305	7.09	539	293	9	184	314	60	40	...	...
Maryland.....	798	8,799	3,664	4.59	416	3,633	100	15	4,273	31	14	35	[3]20
Dimension stone and Clay, ceramic, and refractory minerals.....	71	473	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels).....	26	159	...	...	...	...	...	...	...	...	...	...	...

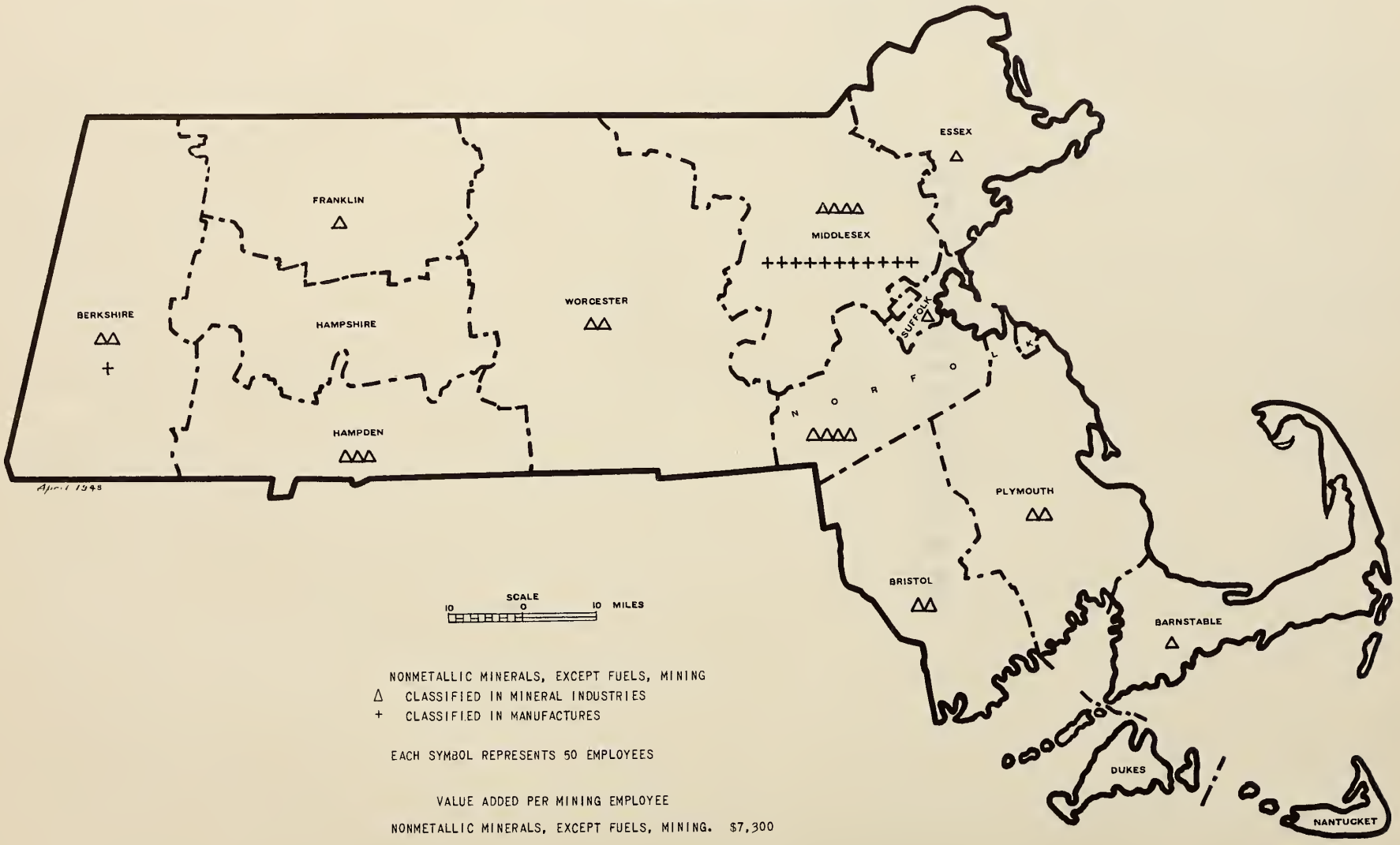
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]Less than one-half of the unit of measure specified.
[3]Includes "not specified," 13 percent.

MASSACHUSETTS

120-1

MINING IN MASSACHUSETTS: 1954

Rank among States:
Employment, 43
Value of Shipments, 43



NONMETALLIC MINERALS, EXCEPT FUELS, MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 50 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

NONMETALLIC MINERALS, EXCEPT FUELS, MINING. $7,300

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of lime plants					
	1954	1939[1]	1929[2]	1954	1939[1]	1929	1919	1909	1902[3]
Number of operating companies	131	102	(NA)	31	39	(NA)	(NA)	[4]139	[4]234
Number of establishments	148	(NA)	95	35	(NA)	73	74	140	(NA)
Number of mines and quarries	149	112	104	35	43	77	79	147	251
Number of preparation plants	111	87	(NA)	29	30	(NA)	(NA)	(NA)	(NA)
Value of shipments[5] $1,000	18,866	5,599	10,387	8,919	3,302	8,571	4,176	3,468	4,672
Value added in mining ..... do	14,719	4,610	8,676	6,288	2,752	7,093	3,407	2,935	3,908
Number of persons engaged, total	1,996	[1]1,617	2,740	1,087	[1]949	2,451	1,910	3,597	4,602
Production and development workers	1,626	[1]1,206	2,419	898	[1]680	2,207	1,704	3,300	[6]4,242
All other employees	298	[1]362	[7]275	179	[1]258	[7]210	156	176	360
Proprietors and firm members	72	[1]49	46	10	[1]11	34	50	121	
Performing manual labor	31	[1]24	(NA)	6			10	43	(NA)
Man-hours worked by production and development workers 1,000	3,382	[1]2,512	(NA)	1,871	(NA)	(NA)	(NA)	(NA)	
Principal expenses, total $1,000	12,251	[1]3,517	6,578	7,524	[1]2,284	5,805	3,163	2,713	3,599
Wages of production and development workers ..... do	6,291	[1]1,486	4,046	3,608	[1]863	3,657	2,069	1,967	2,525
Salaries of all other employees ..... do	1,783	[1]1,042	[7]821	1,348	[1]871	[7]670	325	213	310
Minerals received for preparation ..... do	201	(NA)	(NA)	201	(NA)	(NA)	...	...	(NA)
Supplies ..... do	[8]2,719	[1]433	1,112	1,781	[1]251	1,006	494	364	762
Purchased fuel ..... do	[8]557	[1]294	227	175	[1]132	168	187	153	
Purchased electric energy ..... do	[8]408	[1]256	352	285	[1]167	287	77		
Contract work ..... do	[8]292	[1]6	20	126	...	17	11	16	2
Purchased machinery installed ..... do	[9]1,696		691	777		507			
Capital expenditures, total ..... do	[9]1,726	(NA)	(NA)	714	(NA)	(NA)	(NA)		
Development and exploration of mineral property ..... do	[9]2		137	...		137	24	(NA)	(NA)
Preparation plant construction ..... do	[9]238	[1]64	(NA)	98	22	(NA)	(NA)		
Other construction ..... do	[9]22			8					
New machinery and equipment ..... do	[9]1,111	[1]237		366	73				
Used plant and equipment ..... do	[9]353	[1]185		242	31				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[9]102	[1]58	33	41		27	12	15	11
Per production worker	63	48	14	46		12	7	5	3
Prime movers 1,000	[9]77	[1]31	13	24		10	7	15	11
Electric motors driven by purchased energy ..... do	[9]25	[1]27	20	17		17	5	...	...
Horsepower rating of electric motors driven by energy generated at establishment ..... do	...	[1]2	1	...	(NA)	...	...	1	...
Energy used ..... million kwh equivalent	[9]185	[1]157	217	75		187	(NA)		
Coal ..... 1,000 short tons	[9]1	[1]6	22	1		20	23		
Fuel oils ..... 1,000 barrels	[9]38	[1]22	9	20		8	...		
Gas ..... million cu.ft	[9]3	...	5	...		...	...	(NA)	(NA)
Electric energy purchased ..... million kwh	[9]19	[1]12	14	14		11	(NA)		
Electric energy generated and used ..... do	...	...	...	...		...	(NA)		

NA Not available.

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing granite at such operations was $369,000; this value has been included in the value of shipments and value added in mining. The comparable value for marble and sandstone is not available.

[2]Excludes data for common clay and shale operations. There were 6 such mines in 1939 with products valued at $41,000.

[3]Includes data for lime plants producing lime valued at $324,000.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For crushed stone and clay operations classified in the manufacturing and wholesale trade industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[6]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[7]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[8]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[9]Excludes statistics for crushed stone and clay operations classified in manufactures.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Massachusetts, total		Dimension stone	
		Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures	Mineral industries only
1	Number of operating companies	131	111	12	5
2	Number of establishments	148	127	13	5
	Number of mines and quarries:				
3	1954	149	128	13	5
4	1939	112	(NA)	19	(NA)
5	Number of preparation plants	111	103	8	...
	Value of shipments:[2]				
6	1954, $1,000	18,866	11,577	5,007	542
7	1939, do.	[3] 5,599	(NA)	[3] [4] 1,073	(NA)
8	Value added in mining, do.	14,719	8,925	3,756	431
9	Number of persons engaged, total	1,996	1,292	689	83
10	Production and development workers	1,626	1,009	595	76
11	All other employees	298	215	89	6
12	Proprietors and firm members	72	68	5	1
13	Performing manual labor	31	26	5	...
	Man-hours worked by production and development workers:				
14	1954, 1,000	3,382	2,142	1,161	149
15	1939, do.	[3] 2,512	(NA)	[3] [4] 376	(NA)
	At mines:				
16	Underground, do.	10	10	...	...
17	Open-pit, do.	1,493	1,069	340	144
18	Surface (mine shops, yards, etc.), do.	225	63	167	5
19	At preparation plants, do.	1,654	1,000	654	...
20	Man-hours spent on development and exploration work (included above), do.	500	500	...	...
21	Principal expenses designated below, total, $1,000	12,251	7,627	4,200	397
22	Wages of production and development workers, do.	6,291	3,772	2,303	250
23	Salaries of all other employees, do.	1,783	1,173	645	35
24	Minerals received for preparation, do.	201	4	197	...
25	Supplies, do.	[5] 2,719	1,602	851	89
	Purchased fuel:				
26	Coal, do.	[5] 10	1	10	1
27	Fuel oil, do.	[5] 175	118	57	...
28	Gas, do.	([7])	([7])	...	...
29	Other fuels, do.	[5] 372	350	26	4
30	Purchased electric energy, do.	[5] 408	320	106	18
31	Contract work, do.	[5] 292	287	5	...
32	Purchased machinery installed, do.	[6] 1,696	1,635	76	15
33	Capital expenditures, total, do.	[6] 1,726	1,665	77	16
34	Development and exploration of mineral property, do.	[6] 2	2	...	...
35	Preparation plant construction, do.	[6] 238	203	35	...
36	Other construction, do.	[6] 22	20	2	...
37	New machinery and equipment, do.	[6] 1,111	1,111	4	4
38	Used plant and equipment, do.	[6] 353	329	36	12
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total, 1,000	[6] 102	91	14	3
40	Per production worker	63	90	24	34
41	Prime movers, 1,000	[6] 77	70	9	2
42	Electric motors driven by purchased energy, do.	[6] 25	21	5	1
43	Horsepower rating of electric motors driven by energy generated at establishment, do.	...	...	...	...
44	Energy used, million kwh equivalent	[6] 185	140	48	3
45	Coal, 1,000 short tons	[6] 1	([7])	1	([7])
46	Fuel oil, 1,000 barrels	[6] 38	22	16	...
47	Gas, million cu.ft.	[6] 3	3	...	...
48	Electric energy purchased, million kwh	[6] 19	14	7	2
49	Electric energy generated and used, do.	...	...	...	...
50	Water intake, including mine water used, million gallons	(D)	3,588	(D)	1
51	Per production worker, do.	(D)	3.56	(D)	0.01

D Withheld to avoid approximately disclosing data for individual companies.

NA Not available.

[1]For 1954, represents Clay, ceramic, and refractory minerals, n.e.c., Natural abrasives, except sand, n.e.c., and Peat. Includes data for central office employees for establishments classified in other mineral industries. For 1939, represents Manganese ores and Clay, ceramic, and refractory minerals, n.e.c.

[2]See table 1, footnote 5.

[3]See table 1, footnote 1.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Crushed and broken stone					Sand and gravel	Other industries[1] (including operations classified in manufactures)	
Total		Mineral industries only					
Including operations classified in manufactures	Mineral industries only	Granite	Trap rock	Limestone and Stone, n.e.c.			
23	16	4	8	5	89	9	1
26	19	4	10	5	100	9	2
26	19	4	10	5	101	9	3
27	23	3	12	8	59	7	4
18	18	4	10	4	82	3	5
6,614	3,890	1,089	2,269	532	7,123	122	6
[4]2,542	[4]2,230	369	1,376	[4]485	1,944	[4]40	7
5,104	2,717	688	1,676	353	5,761	98	8
433	335	84	172	79	794	80	9
398	300	69	154	77	613	20	10
32	32	15	17	...	119	58	11
3	3	...	1	2	62	2	12
...	...	...	...	...	25	1	13
898	703	157	383	163	1,283	40	14
[4]1,232	(NA)	147	556	(NA)	874	[4]30	15
...	...	...	...	...	10	...	16
533	338	80	196	62	584	36	17
58	58	5	53	...	...	...	18
307	307	72	134	101	689	4	19
...	...	...	...	...	500	...	20
3,316	2,564	698	1,403	463	4,107	628	21
1,708	1,293	311	702	280	2,217	63	22
162	162	67	95	...	435	541	23
4	4	4	...	...	(NA)	...	24
	725	237	392	96	784		25
	...	...	...	...	...		26
1,442	15	7	5	3	103		27
	...	...	...	...	([7])	24	28
	65	15	42	8	279		29
	179	43	108	28	123		30
	121	14	59	48	166		31
	698	280	340	78	919		32
	634	199	353	82	1,012		33
	...	...	...	...	2		34
	63	38	7	18	140		35
	6	...	6	...	14		36
	359	161	134	64	745		37
	206	...	206	...	111		38
	27	8	16	3	61		39
	90	115	101	33	99		40
	15	4	9	2	53		41
(NA)						(NA)	
	12	4	7	1	8		42
	...	...	...	...	...		43
	26	7	16	3	110		44
	...	...	...	...	...		45
	2	1	1	([7])	20		46
	...	...	...	...	3		47
	7	2	4	1	5		48
	...	...	...	...	...		49
	88	8	57	23	3,499		50
	0.29	0.12	0.37	0.30	5.71		51

[4]Figures for 1 manganese ores mine, 1 crushed and broken sandstone quarry, and 1 sandstone crushing plant are included with those for Dimension stone. The value of products of these operations was less than $48,000.
[5]See table 1, footnote 8.
[6]See table 1, footnote 9.
[7]Less than one-half of the unit of measure specified.

Table 3.--SELECTED STATISTICS FOR MINERAL OPERATIONS IN SELECTED MASSACHUSETTS COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees		Man-hours worked by production and development workers (1,000)	Wages and salaries		New capital expenditures ($1,000)
				Production and development workers	All other employees		Production and development workers ($1,000)	All other employees ($1,000)	
Massachusetts, all mineral operations:									
Including operations in manufactures	148	18,866	14,719	1,626	298	3,382	6,291	1,783	[1]1,373
Mineral industries only	127	11,577	8,925	1,009	215	2,142	3,772	1,173	1,336
Dimension stone:									
Including operations in manufactures	13	5,007	3,756	595	89	1,161	2,303	645	41
Mineral industries only	5	542	431	76	6	149	250	35	4
Crushed and broken stone:									
Including operation in manufactures and wholesale trade	26	6,614	5,104	398	32	898	1,708	162	(NA)
Mineral industries only	19	3,890	2,717	300	32	703	1,293	162	428
Sand and gravel	100	7,123	5,761	613	119	1,283	2,217	435	901
Other industries	9	122	98	20	58	40	63	541	(NA)
COUNTY									
Barnstable	4	351	241	28	25	48	86	68	33
Berkshire:									
Including operations in manufactures	16	2,489	2,194	114	3	209	347	9	(NA)
Mineral industries only	11	745	547	78	3	138	228	9	114
Sand and gravel	6	550	419	59	3	98	154	9	32
Bristol (mineral industries only)	14	1,103	841	88	33	190	292	150	109
Essex (mineral industries only)	12	745	566	61	2	129	267	12	68
Franklin (mineral industries only)	3	187	148	45	2	101	186	12	...
Hampden (mineral industries only)	11	1,522	1,309	120	11	305	557	60	433
Middlesex (mineral industries only), total	25	2,153	1,657	201	18	429	772	86	91
Crushed and broken stone	4	871	586	97	4	206	350	23	4
Sand and gravel	21	1,282	1,071	104	14	223	422	63	87
Norfolk (mineral industries only)	14	2,227	1,779	153	23	337	597	118	184
Plymouth (mineral industries only)	11	924	661	73	5	145	237	19	34
Worcester	15	1,187	965	105	11	232	376	56	113
Sand and gravel	11	523	469	48	5	96	155	15	89

NA Not available.

[1]See table 1, footnote 9.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All industries			Dimension stone			Crushed and broken stone			
				Granite		Sandstone (included in manufactures)	Limestone		Granite	
	Total	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in manufactures (lime)	Classified in mineral industries	Included in manufactures
Massachusetts, total..	148	127	21	5	7	1	3	4	4	1
Barnstable	4	4	...	...	...	...	...	...	...	...
Berkshire	16	11	5	...	1	...	3	4	...	...
Bristol	15	14	1	...	...	...	...	...	...	...
Essex	13	12	1	1	...	...	...	...	...	...
Franklin	4	3	1	...	...	...	...	...	...	...
Hampden	14	11	3	...	...	1	...	...	...	...
Hampshire	4	4	...	...	...	...	...	...	...	...
Middlesex	30	25	5	...	5	...	...	...	1	...
Norfolk	16	14	2	1	1	...	...	...	1	...
Plymouth	13	11	2	1	...	...	...	...	1	...
Suffolk	4	3	1	...	...	...	...	...	1	1
Worcester	15	15	...	2	...	...	...	...	...	...

County	Crushed and broken stone--Continued			Sand and gravel		Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures--Brick and hollow tile)	Natural abrasives, except sand, n.e.c.	Peat
	Trap rock		Stone, n.e.c.	Common sand and gravel	Foundry sand			
	Classified in mineral industries	Included in manufactures (bituminous concrete)						
Massachusetts, total..	10	2	2	98	2	6	1	2
Barnstable	...	...	...	4	...	...	...	...
Berkshire	...	...	...	6	...	...	1	1
Bristol	1	...	...	13	...	1	...	...
Essex	1	1	...	9	...	...	...	1
Franklin	1	...	...	2	...	1	...	...
Hampden	3	...	...	8	...	2	...	...
Hampshire	...	...	...	4	...	...	...	...
Middlesex	2	...	1	20	1	...	...	...
Norfolk	...	1	...	12	...	...	...	...
Plymouth	...	...	...	8	1	2	...	...
Suffolk	...	...	1	1	...	...	...	...
Worcester	2	...	...	11	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Massachusetts, all mineral operations (Nonmetallic minerals (except fuels) mining):												
Including operations classified in manufactures	148	13	54	26	39	14	1	...	...	1	...	...
Mineral industries only	127	10	46	24	34	12	1	...	...	...	...	...
Dimension stone:												
Granite:												
Classified in mineral industries	5	...	2	...	2	1	...	...	...	...	...	...
Included in manufactures	7	1	2	1	2	...	...	...	...	1	...	...
Sandstone (included in manufactures)	1	...	...	...	1	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	3	...	...	3	...	...	...	...	...	...	...	...
Included in manufactures	4	1	1	...	1	1	...	...	...	...	...	...
Granite:												
Classified in mineral industries	4	...	...	1	1	2	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Trap rock:												
Classified in mineral industries	10	...	...	1	7	2	...	...	...	...	...	...
Included in wholesale trade	2	...	...	...	1	1	...	...	...	...	...	...
Stone, n.e.c. (classified in mineral industries)	2	...	1	...	...	...	1	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	98	9	40	19	23	7	...	...	...	...	...	...
Foundry sand	2	...	1	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	6	1	4	1	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...
Peat	2	1	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Massachusetts, total	992	8,925	3,522	3.56	395	3,483	66	...	3,834	7	59	10	24
Nonmetallic minerals (except fuels) mining:													
Dimension stone (granite)	76	431	1	0.01	2	1	...	...	...	...	100	...	...
Crushed and broken stone:													
Granite	69	688	8	0.12	12	8	...	...	8	12	...	...	[2]88
Trap rock	154	1,676	57	0.37	34	53	...	...	64	44	14	2	40
Limestone and Stone, n.e.c.	77	353	23	0.30	65	22	...	...	23	17	83	...	...
Sand and gravel	613	5,761	3,433	5.60	596	3,399	66	...	3,739	6	59	11	[2]24
Natural abrasives, except sand, n.e.c. and Peat	3	16	...	...	...	...	...	...	...	...	...	...	...

[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]Includes "not specified" as follows: for Crushed and broken granite, 25 percent; for Sand and gravel, 23 percent.

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MICHIGAN

121-1

MINING IN MICHIGAN: 1954

Rank among States:
Employment, 12
Value of shipments, 17



▲ METAL MINING
● CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING..... $7,000
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION. 14,700
NONMETALLIC MINERALS (EXCEPT FUELS) MINING. 11,900

SCALE
20 10 0 20 MILES

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries, and common clay and shale and contract service operations		
	1954	1939	1919[1]	1909[1]	1902[2]	1954[3]	1939[4]	1919
Number of operating companies	524	554	(NA)	[5]97	[5]153	252	[5]129	(NA)
Number of establishments	591	(NA)	128	133	(NA)	310	(NA)	161
Number of mines and quarries	335	182	171	186	196	320	161	194
Number of oil and gas wells producing at end of year	4,188	3,002	19	22	12	xxx	xxx	xxx
Number of preparation plants	211	106	(NA)	(NA)	(NA)	206	102	(NA)
Value of shipments[6]...$1,000	199,440	80,604	103,870	67,714	48,023	152,986	52,812	95,262
Value added in mining...do	153,036	64,933	79,833	52,959	39,107	119,674	42,339	72,241
Number of persons engaged, total	17,244	17,404	33,472	41,711	32,909	14,662	13,200	22,340
Production and development workers	13,991	15,223	31,537	39,879	31,366	11,952	12,081	20,879
All other employees	2,702	1,809	1,916	1,714	1,543	2,432	1,068	[8]1,437
Proprietors and firm members	551	372	19	118	(NA)	278	51	24
Performing manual labor	265	73	6	75	(NA)	152	27	(NA)
Man-hours worked by production and development workers...1,000	28,762	28,951	(NA)	(NA)	(NA)	24,592	23,413	(NA)
Principal expenses designated below, total...$1,000	146,989	39,614	79,144	45,170	30,485	119,458	28,728	55,694
Wages of production and development workers...do	62,160	19,677	50,750	28,147	19,790	53,310	15,568	28,886
Salaries of all other employees...do	15,182	4,266	4,357	2,268	1,779	13,658	2,687	[8]3,787
Minerals received for preparation...do	6,922	(NA)	...	...	(NA)	6,883	(NA)	(NA)
Supplies...do	33,078	7,466	15,497	9,972	8,839	24,806	6,237	15,886
Fuel[9]...do	4,950	2,593	7,500	4,271		4,003	2,063	4,429
Purchased electric energy...do	4,581	2,103	1,005			4,374	1,997	2,627
Contract work...do	20,116	3,509	35	512	77	12,424	176	79
Purchased machinery installed...do	23,520		(NA)			19,445		3,267
Capital expenditures, total...do	46,763	(NA)	(NA)			38,623	(NA)	(NA)
Development and exploration of mineral property...do	13,266		3,316	(NA)	(NA)	9,444		5,251
Preparation plant construction...do	5,385	415				5,385	255	
Other construction...do	6,393		(NA)			6,273		(NA)
New machinery and equipment...do	20,660	3,372				16,879	731	
Used plant and equipment...do	1,059	720				642	111	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	942	435	341	279	205	779	354	397
Per production worker	67	29	11	7	7	65	29	19
Prime movers...1,000	633	248	275	276	205	477	188	244
Electric motors driven by purchased energy...do	309	187	66	3	...	302	166	153
Horsepower rating of electric motors driven by energy generated at establishment...do	134	75	108	18	6	134	74	98
Energy used...million kwh equivalent	3,669	4,525	(NA)			2,810	3,332	7,947
Coal...1,000 short tons	264	403	1,398			264	398	1,003
Fuel oils...1,000 barrels	263	41	3	(NA)	(NA)	208	19	25
Gas[10]...million cu.ft	1,851	3,683	34			14	150	...
Electric energy purchased...million kwh	301	157	(NA)			253	150	174
Electric energy generated and used...do	187	150	(NA)			187	148	222

NA Not available.

[1]Excludes data for sand, gravel, common clay, and shale operations, and for limestone quarries operated as part of cement and lime plants. In 1939, the value of products of such establishments was $3,528,000.

[2]Excludes data for sand, gravel, common clay, and shale operations; and for quarries operated as part of cement plants producing cement valued at $2,134,000. Includes data for lime plants producing lime valued at $208,000.

[3]Includes data for 1 establishment in the Nonmetallic minerals (except fuels) contract services industry.

[4]Includes data for one producing natural gas liquids plant, but excludes data for 9 nonproducing iron ores mines.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[10]Includes data for gas produced and used at the same establishment for power and heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP
(For explanation of line captions and for statement on the minimum

	Item	Michigan, total		Metal mining				Crude petroleum and natural gas extraction	
		Including operations classified in manufactures	Mineral industries only	Total	Iron ores	Copper ores	Metal mining contract services	Total	Crude petroleum
1	Number of operating companies	524	505	18	11	3	4	258	168
2	Number of establishments	591	567	54	42	8	4	262	169
	Number of mines, quarries, and producing oil and gas wells:								
3	1954	4,523	4,499	48	43	5	xxx	4,188	3,980
4	1939	[1]3,184	(NA)	54	48	6	xxx	3,002	(NA)
5	Number of preparation plants	211	209	9	4	5	xxx	3	xxx
	Value of shipments:[2]								
6	1954 ..... $1,000	199,440	194,668	95,217	71,697	22,396	1,124	43,233	33,833
7	1939 ..... do	[1]80,604	(NA)	39,235	29,456	9,411	368	27,224	[3]22,384
8	Value added in mining ..... do	153,036	149,074	73,958	59,050	14,126	782	[5]30,973	24,341
9	Number of persons engaged, total	17,244	16,980	10,623	7,944	2,537	89	2,373	1,498
10	Production and development workers	13,991	13,729	8,690	6,514	2,094	82	1,837	1,128
11	All other employees	2,702	2,702	[6]1,928	1,429	443	3	267	198
12	Proprietors and firm members	551	549	5	1	...	4	269	172
13	Performing manual labor	265	264	3	1	...	2	111	60
	Man-hours worked by production and development workers:								
14	1954 1,000	28,762	28,238	17,246	12,582	4,479	185	3,744	2,251
15	1939 ..... do	[1]28,951	(NA)	[7]17,294	[7]10,372	6,725	197	[7]5,128	[3] [7]3,980
	At mines:								
16	Underground ..... do	11,548	11,357	11,022	8,745	2,226	51	...	...
17	Open-pit ..... do	3,756	3,440	305	263	....	42	...	...
18	Surface (mine shops, yards, etc.) ..... do	5,702	5,698	5,122	3,461	1,569	92	...	...
19	At preparation plants ..... do	4,051	4,038	797	113	684	...	39	...
20	At oil and gas field operations ..... do	3,705	3,705	xxx	xxx	xxx	xxx	3,705	2,251
21	Man-hours spent on development and exploration work (included above) ..... do	3,741	3,741	2,141	1,568	573	...	1,587	409
22	Principal expenses designated below, total $1,000	146,989	145,159	89,976	58,494	30,322	742	[5]25,819	19,008
23	Wages of production and development workers ..... do	62,160	61,134	38,136	29,937	7,824	375	7,995	4,868
24	Salaries of all other employees ..... do	15,182	15,182	[6]10,893	8,333	2,120	22	1,502	1,026
25	Minerals received for preparation ..... do	6,922	6,922	[12]35,387	...	[12]17,979	...	[5]7,684	xxx
26	Supplies ..... do	33,078	32,277		12,382		306		5,191
	Purchased fuel:								
27	Coal $1,000	2,313	2,313	1,899	644	1,254	1	2	2
28	Fuel oils ..... do	1,335	1,335	351	85	236	30	266	70
29	Gas ..... do	25	25	...	...	...	...	21	16
30	Other fuels ..... do	1,277	1,274	75	27	41	7	499	247
31	Purchased electric energy ..... do	4,581	4,581	3,235	2,366	868	1	158	156
32	Contract work ..... do	20,116	20,116	([12])	4,720	([12])	...	7,692	7,432
33	Purchased machinery installed ..... do	23,520	23,513	15,274	3,983	11,271	20	4,009	3,023
34	Capital expenditures, total ..... do	46,763	46,762	34,962	11,560	23,379	23	8,071	6,645
35	Development and exploration of mineral property ..... do	13,266	13,266	9,363	3,956	5,407	...	3,822	3,539
36	Preparation plant construction ..... do	5,385	5,385	4,942	2,452	2,490	...	xxx	xxx
37	Other construction ..... do	6,393	6,392	5,881	1,667	4,211	3	117	99
38	New machinery and equipment ..... do	20,660	20,660	14,664	3,373	11,271	20	3,715	2,746
39	Used plant and equipment ..... do	1,059	1,059	112	112	...	...	417	261
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	942	940	480	282	193	5	156	101
41	Per production worker	67	68	55	43	92	61	85	90
42	Prime movers 1,000	633	631	262	105	152	5	150	95
43	Electric motors driven by purchased energy ..... do	309	309	218	177	41	([11])	6	6
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	134	134	108	76	32	([11])	([11])	([11])
45	Energy used ..... million kwh equivalent	3,669	3,668	2,001	637	1,354	10	777	607
	Produced and used for fuel:								
46	Natural gas ..... million cu.ft	1,670	1,670	...	...	....	xxx	1,670	1,512
	Purchased fuels:								
47	Coal ..... 1,000 short tons	264	264	215	60	155	([11])	([11])	([11])
48	Fuel oils ..... 1,000 barrels	263	263	65	14	46	5	46	14
49	Gas ..... million cu.ft	179	179	...	...	...	...	165	156
50	Electric energy purchased ..... million kwh	301	301	220	145	75	([11])	8	8
51	Electric energy generated and used ..... do	187	187	152	75	77	...	([11])	([11])
52	Water intake, including mine water used ..... million gallons	37,865	37,865	17,155	1,571	15,577	7	471	401
53	Per production worker ..... do	2.71	2.76	1.97	0.24	7.44	0.09	0.26	0.36

NA Not available. xxx Not applicable. [1]Includes data for 11 bituminous coal mines. No coal mining operations were reported in Michigan in 1954. [2]See table 1, footnote 6. [3]Figures for the Natural gas industry are included with those for the Crude petroleum industry. [4]Figures for 1 natural gasoline plant and 1 crushed and broken stone, n.e.c., quarry are included with those for "Clay, ceramic, and refractory minerals and Other industries." [5]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year see INTRODUCTION)

Crude petroleum and natural gas extraction—Continued				Nonmetallic minerals (except fuels) mining								
				Total				Sand and gravel		Clay, ceramic, and refractory minerals and Other industries (including operations classified in manufacturing)		
Natural gas	Drilling oil and gas wells contract services	Oil and gas field contract services, n.e.c.	Natural gas liquids and Building, repairing, and dismantling rigs and derricks	Including operations classified in manufactures	Mineral industries only	Dimension stone (including operations classified in manufactures)	Crushed and broken stone (including operations classified in manufactures)	Common sand and gravel	Glass sand and Foundry sand	All industries	Clay, ceramic, and refractory minerals, n.e.c.	
11	46	30	6	250	231	3	38	175	10	26	13	1
11	46	30	6	275	251	3	39	193	11	28	15	2
72	131	5	...	288	263	3	39	206	11	29	15	3
(NA)	(NA)	(NA)	(NA)	117	(NA)	...	17	68	12	20	12	4
xxx	xxx	xxx	3	199	197	2	15	162	10	10	2	5
262	7,897	1,006	235	60,990	56,218	135	22,692	21,867	2,619	13,677	2,097	6
(3)	2,138	2,658	[4]44	12,422	(NA)	...	[4]6,896	2,762	356	[4]2,408	201	7
187	5,547	772	[5]126	48,105	44,143	92	17,072	17,086	2,174	11,681	1,607	8
49	640	152	34	4,248	3,984	22	1,573	1,847	130	676	120	9
31	535	113	30	3,464	3,202	18	1,352	1,364	100	630	120	10
8	58	2	1	507	507	1	194	251	20	41	...	11
10	47	37	3	277	275	3	27	232	10	5	...	12
7	19	23	2	151	150	1	17	125	7	1	...	13
47	1,185	214	47	7,772	7,248	35	3,041	2,998	237	1,461	241	14
(3)	782	336	[4]21	5,210	(NA)	...	[4]2,841	1,320	84	[4]965	214	15
...	...	...	...	526	335	11	1	...	...	514	8	16
...	...	...	...	3,451	3,135	7	1,455	[8]1,398	101	490	191	17
...	...	...	...	580	576	4	520	(NA)	(NA)	56	...	18
...	...	...	39	3,215	3,202	13	1,065	1,600	136	401	42	19
47	1,185	214	8	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
5	1,147	18	8	13	13	...	...	7	6	...	...	21
241	5,697	648	[5]225	31,194	29,364	93	13,585	11,006	1,046	5,464	970	22
125	2,504	384	114	16,029	15,003	56	6,443	6,003	428	3,099	480	23
18	455	1	2	2,787	2,787	...	1,388	975	147	277	...	24
xxx	xxx	xxx	[5]104	...	...	...	...	(NA)	(NA)	...	...	25
54	2,139	196		[12]9,353	[12]8,554	33	[9]4,544	1,749	166	[9] [12]1,688	321	26
...	...	...	...	412	412	...	[9]379	25	6	[9]2	...	27
...	193	3	...	718	718	1	[9]186	360	136	[9]35	20	28
...	5	(11)	...	4	4	...	...	4	...	(11)	...	29
4	192	51	5	703	700	3	[9]82	476	15	[9]127	101	30
1	1	...	...	1,188	1,188	...	[9]305	575	72	[9]236	48	31
39	208	13	...	(12)	(12)	...	[9]258	839	76	(12)	...	32
6	954	26	...	4,237	4,230	13	[10]830	2,920	172	[10]302	46	33
29	1,342	55	...	3,730	3,729	7	[10]964	2,167	198	[10]394	46	34
16	267	...	...	81	81	...	...	18	10	[10]53	...	35
xxx	...	xxx	...	443	443	...	[10]116	259	68	...	...	36
6	926	5	...	395	394	1	[10]307	48	...	[10]39	...	37
4		46	...	2,281	2,281	...	[10]485	1,394	100	[10]302	46	38
3	149	4	...	530	530	6	[10]56	448	20	...	...	39
3	38	10	4	306	304	2	[10]110	163	9	[10]22	2	40
97	71	88	133	88	95	111	81	120	90	35	17	41
3	38	10	4	221	219	2	[10]81	126	5	[10]7	1	42
...	...	...	...	85	85	(11)	[10]29	37	4	[10]15	1	43
...	...	...	...	26	26	...	[10]24	(11)	...	[10]2	...	44
4	106	14	46	891	890	1	[10]445	304	81	[10]60	36	45
10	2	...	146	...	...	...	...	...	...	...	...	46
...	...	...	...	49	49	...	[10]45	3	1	(11)	...	47
...	32	(11)	...	152	152	(11)	[10]37	71	38	[10]6	4	48
...	9	(11)	...	14	14	...	...	14	...	(11)	...	49
(11)	(11)	...	...	73	73	...	[10]15	36	5	[10]17	3	50
...	...	...	...	35	35	...	[10]35	...	...	(11)	...	51
...	49	...	21	20,239	20,239	...	[10]8,972	10,453	780	[10]34	18	52
...	0.09	...	0.70	5.84	6.32	...	6.64	7.66	7.80	0.05	0.15	53

[6]Includes central office employees for metal mining industries other than those specified separately. [7]Man-hours for 9 nonproducing iron ores mines are included with those for Crude petroleum and Natural gas. [8]Includes man-hours worked on floating equipment. [9]Figures for fuels, electric energy, and contract work for crushed stone, clay, and gypsum operations classified in manufactures are included with figures for supplies. [10]Excludes figures for crushed stone, clay, and gypsum operations classified in manufactures. [11]Less than one-half of the unit of measure specified. [12]The cost of contract work is included with the cost of supplies.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Michigan, all mineral operations: Including operations in manufactures	591	199,440	153,036	13,991	2,702	28,762	62,160	15,182	[2]45,704
Mineral industries only: Including crude petroleum and natural gas extraction	567	194,668	149,074	13,729	2,702	28,238	61,134	15,182	45,703
Excluding crude petroleum and natural gas extraction	305	151,435	118,101	11,895	2,379	24,494	53,139	13,262	38,049
Metal mining, total	54	95,217	73,958	8,690	1,928	17,246	38,136	10,893	34,850
Iron ores	42	71,697	59,050	6,514	1,429	12,582	29,937	8,333	11,448
Copper ores	8	22,396	14,126	2,094	443	4,479	7,824	2,120	23,379
Metal mining contract services	4	1,124	782	82	3	185	375	22	23
Crude petroleum and natural gas extraction, total	262	43,233	[3]30,973	1,837	267	3,744	7,995	1,502	7,654
Crude petroleum and natural gas[4]	180	34,095	24,528	1,159	206	2,298	4,993	1,044	6,410
Natural gas liquids and Oil and gas field contract services[5]	82	9,138	([3])	678	61	1,446	3,002	458	1,244
Nonmetallic minerals (except fuels) mining, total: Including operations in manufactures	275	60,990	48,105	3,464	507	7,772	16,029	2,787	[2]3,200
Mineral industries only	251	56,218	44,143	3,202	507	7,248	15,003	2,787	3,199
Dimension stone (including operations in manufactures)	3	135	92	18	1	35	56	...	1
Crushed and broken stone (including operations in manufactures)	39	22,692	17,072	1,352	194	3,041	6,443	1,388	[2]908
Sand and gravel	204	24,486	19,260	1,464	271	3,235	6,431	1,122	1,897
Clay, ceramic, and refractory minerals, n.e.c. (including operations in manufactures)	15	2,097	1,607	120	...	241	480	...	[2]46
Other industries (including operations in manufactures)	14	11,580	10,074	510	41	1,220	2,619	277	[2]348
COUNTY									
Allegan (mineral industries only)	44	(NA)	(NA)	[6]235	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	37	(NA)	(NA)	[6]64	([6])	(NA)	(NA)	(NA)	(NA)
Arenac	25	(NA)	(NA)	[6]69	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	22	(NA)	(NA)	[6]67	([6])	(NA)	(NA)	(NA)	(NA)
Barry	7	(NA)	(NA)	[6]22	([6])	(NA)	(NA)	(NA)	(NA)
Bay (mineral industries only)	21	(NA)	(NA)	[6]57	([6])	(NA)	(NA)	(NA)	(NA)
Berrien	10	828	728	39	7	81	151	56	10
Calhoun	5	[8]131	[8]109	[6]8	([6])	[8]15	[8]24	([6])	...
Chippewa	3	(D)	(D)	168	18	(D)	(D)	(D)	(D)
Clare	16	(NA)	(NA)	[6]75	([6])	(NA)	(NA)	(NA)	(NA)
Clinton	3	243	197	[6]21	([6])	42	[6]107	([6])	4
Crawford	6	(NA)	(NA)	[6]42	([6])	(NA)	(NA)	(NA)	(NA)
Dickinson	7	399	357	32	5	56	91	12	2
Eaton (mineral industries only)	4	252	203	8	...	20	35	...	16
Genesee	11	[9]736	[9]563	[6]55	([6])	[9]121	[9]255	[9]11	[9]80
Gladwin	25	(NA)	(NA)	[6]90	([6])	(NA)	(NA)	(NA)	(NA)
Gogebic	12	[9]16,527	[9]14,061	[6]1,908	([6])	[9]2,975	[9]7,184	[9]1,553	[9]2,531
Gratiot (mineral industries only)	9	(NA)	(NA)	[6]26	([6])	(NA)	(NA)	(NA)	(NA)
Hillsdale	6	695	488	22	4	50	87	32	26
Houghton	5	15,737	6,503	1,183	317	2,534	4,093	1,555	707
Ingham	8	[9]579	[9]410	[6]47	([6])	[9]35	[9]68	[9]61	[9]60
Iron	20	26,776	21,471	1,855	273	3,609	9,033	1,828	1,903
Iron ores	15	25,620	20,661	1,766	270	3,419	8,646	1,806	1,879
Isabella, total	27	(NA)	(NA)	[6]171	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	23	(NA)	(NA)	[6]152	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	4	183	113	15	4	35	54	8	29
Jackson (mineral industries only)	8	267	219	29	5	58	99	27	28
Kalamazoo	10	[9]420	[9]325	[6]65	([6])	[9]62	[9]102	[9]23	[9]10
Kent (mineral industries only), total	31	(NA)	(NA)	[6]152	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	20	(NA)	(NA)	[6]51	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (mineral industries only)	11	1,458	1,322	75	26	183	332	71	75
Lenawee (mineral industries only)	7	195	153	11	5	26	46	8	46
Livingston	3	(NA)	(NA)	[6]158	([6])	(NA)	(NA)	(NA)	(NA)
Macomb	15	1,086	849	69	11	153	339	47	170
Marquette	18	27,506	23,094	3,051	919	6,138	13,997	4,944	6,927

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Mason	7	(NA)	(NA)	[6]31	([6])	(NA)	(NA)	(NA)	(NA)
Mecosta	11	(NA)	(NA)	[6]27	([6])	(NA)	(NA)	(NA)	(NA)
Midland	21	(NA)	(NA)	[6]142	([6])	(NA)	(NA)	(NA)	(NA)
Missaukee	8	(NA)	(NA)	[6]68	([6])	(NA)	(NA)	(NA)	(NA)
Montcalm	20	(NA)	(NA)	[6]63	([6])	(NA)	(NA)	(NA)	(NA)
Muskegon (mineral industries only)	10	(NA)	(NA)	[6]112	([6])	(NA)	(NA)	(NA)	(NA)
Newaygo	10	(NA)	(NA)	[6]43	([6])	(NA)	(NA)	(NA)	(NA)
Oakland (mineral industries only)	20	5,803	4,098	277	40	679	1,351	190	222
Oceana	9	(NA)	(NA)	[6]22	([6])	(NA)	(NA)	(NA)	(NA)
Ogemaw	23	(NA)	(NA)	[6]81	([6])	(NA)	(NA)	(NA)	(NA)
Osceola	18	(NA)	(NA)	[6]109	([6])	(NA)	(NA)	(NA)	(NA)
Ottowa, total	17	(NA)	(NA)	[6]60	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	11	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	6	473	415	31	4	68	117	21	30
Roscommon	5	(NA)	(NA)	[6]17	([6])	(NA)	(NA)	(NA)	(NA)
Saginaw (mineral industries only)	7	(NA)	(NA)	[6]44	([6])	(NA)	(NA)	(NA)	(NA)
Shiawassee (mineral industries only)	6	232	178	17	1	32	69	1	15
Tuscola, total	12	(NA)	(NA)	[6]56	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	4	(NA)	(NA)	[6]11	([6])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	8	807	682	43	2	94	146	5	53
Van Buren	13	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)
Washtenaw, total	17	(NA)	(NA)	[6]151	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	3	(NA)	(NA)	[6]30	([6])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	14	1,280	1,054	100	21	163	367	160	55
Wayne (mineral industries only)	13	[8]10,279	[8]9,077	[6]513	([6])	[8]822	[8]2,044	[8]1,422	[8]556

NA Not available.
D Withheld to avoid approximately disclosing figures for individual companies.
[1]See table 1, footnote 6.
[2]See table 2, footnote 10.
[3]See table 2, footnote 5.
[4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.
[6]Figures for "All other employees" are included with those for "Production and development workers."
[7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.
[8]Excludes data for one Crude petroleum or Natural gas establishment.
[9]Excludes data for 2 Crude petroleum or Natural gas establishments.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	State and county	All mineral operations			Metal mining			Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining		
											Dimension stone		
												Sandstone	
		Total	Classified in mineral industries	Included in manufactures	Iron ores	Copper ores	Metal mining contract services	Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Limestone (included in manufactures)	Classified in mineral industries	Included in manufactures
1	Michigan, total.....	591	567	24	42	8	4	180	3	79	1	1	1
2	Alger.....	1	1	...	...	...	...	...	...		...	...	...
3	Allegan.....	44	44	...	...	...	...	37	...		...	...	...
4	Alpena.....	3	1	2	...	...	...	...	...		...	...	...
5	Arenac.....	25	25	...	...	...	...	22	...		...	...	...
6	Baraga.....	2	2	...	1	...	...	1	...		...	...	...
7	Barry.....	7	7	...	...	...	...	2	...		...	...	...
8	Bay.....	22	21	1	...	...	...	21	...		...	...	...
9	Berrien.....	10	10	...	...	...	...	...	...		...	...	...
10	Branch.....	3	3	...	...	...	...	...	...		...	...	...
11	Calhoun.....	5	5	...	...	...	...	1	...		...	...	...
12	Cass.....	3	3	...	...	...	...	...	...		...	...	...
13	Charlevoix.....	1	1	...	...	...	...	...	...		...	...	...
14	Cheboygan.....	2	2	...	...	...	...	...	...		...	...	...
15	Chippewa.....	3	3	...	...	...	...	...	...		...	...	...
16	Clare.....	16	16	...	...	...	...	16	...		...	...	...
17	Clinton.....	3	3	...	...	...	...	...	...		...	...	...
18	Crawford.....	6	6	...	...	...	...	5	1		...	...	...
19	Delta.....	4	4	...	...	...	...	...	...		...	...	...
20	Dickinson.....	7	7	...	2	...	...	...	...		...	...	...
21	Eaton.....	6	4	2	...	...	...	...	...		...	...	...
22	Emmet.....	4	2	2	...	...	...	...	...		...	...	...
23	Genesee.....	11	11	...	...	...	...	2	...		...	...	...
24	Gladwin.....	25	25	...	...	...	...	25	...		...	...	...
25	Gogebic.....	12	12	...	8	...	...	2	...		...	...	...
26	Grand Traverse.....	1	1	...	...	...	...	...	...		...	...	...
27	Gratiot.....	9	8	1	...	...	...	6	...		...	...	...
28	Hillsdale.....	6	6	...	...	...	...	...	...		...	...	...
29	Houghton.....	5	5	...	...	5	...	...	...		...	...	...
30	Huron.....	4	4	...	...	...	...	1	...		...	...	...
31	Ingham.....	8	8	...	...	...	...	2	...		...	...	...
32	Ionia.....	2	2	...	...	...	...	1	...		...	...	...
33	Iosco.....	2	1	1	...	...	...	...	...		...	...	...
34	Iron.....	20	20	...	15	...	4	...	...		...	...	...
35	Isabella.....	27	27	...	...	...	...	23	1		...	...	...
36	Jackson.....	9	8	1	...	...	...	...	...		...	1	1
37	Kalamazoo.....	10	10	...	...	...	...	2	...		...	...	...
38	Kalkaska.....	3	3	...	...	...	...	3	...		...	...	...
39	Kent.....	33	31	2	...	...	...	20	...	(NA)	...	...	...
40	Keweenaw.....	1	1	...	...	1	...	...	...		...	...	...
41	Lake.....	5	5	...	...	...	...	4	...		...	...	...
42	Lapeer.....	2	2	...	...	...	...	1	...		...	...	...
43	Lenawee.....	10	7	3	...	...	...	...	...		...	...	...
44	Livingston.....	3	3	...	...	...	...	2	...		...	...	...
45	Mackinac.....	3	3	...	...	...	...	...	...		...	...	...
46	Macomb.....	15	15	...	...	...	...	...	...		...	...	...
47	Manistee.....	2	2	...	...	...	...	...	...		...	...	...
48	Marquette.....	18	18	...	16	...	...	...	...		...	...	...
49	Mason.....	7	7	...	...	...	...	6	...		...	...	...
50	Mecosta.....	11	11	...	...	...	...	10	...		...	...	...
51	Midland.....	21	21	...	...	...	...	19	1		...	...	...
52	Missaukee.....	8	8	...	...	...	...	6	...		...	...	...
53	Monroe.....	4	3	1	...	...	...	...	...		...	...	...
54	Montcalm.....	20	20	...	...	...	...	18	...		...	...	...
55	Muskegon.....	11	10	1	...	...	...	8	...		...	...	...
56	Newaygo.....	10	10	...	...	...	...	8	...		...	...	...
57	Oakland.....	21	20	1	...	...	...	...	...		...	...	...
58	Oceana.....	9	9	...	...	...	...	9	...		...	...	...
59	Ogemaw.....	23	23	...	...	...	...	22	...		...	...	...
60	Ontonagon.....	2	2	...	...	2	...	...	...		...	...	...
61	Osceola.....	18	18	...	...	...	...	16	...		...	...	...
62	Oscoda.....	1	1	...	...	...	...	1	...		...	...	...
63	Otsego.....	1	1	...	...	...	...	...	...		...	...	...
64	Ottawa.....	17	17	...	...	...	...	11	...		...	...	...
65	Presque Isle.....	3	2	1	...	...	...	...	...		1	...	...
66	Roscommon.....	5	5	...	...	...	...	5	...		...	...	...
67	Saginaw.....	8	7	1	...	...	...	6	...		...	...	...
68	St. Clair.....	3	2	1	...	...	...	...	...		...	...	...
69	St. Joseph.....	1	1	...	...	...	...	...	...		...	...	...
70	Sanilac.....	3	3	...	...	...	...	...	...		...	...	...
71	Shiawassee.....	7	6	1	...	...	...	...	...		...	...	...
72	Tuscola.....	12	12	...	...	...	...	4	...		...	...	...
73	Van Buren.....	13	13	...	...	...	...	11	...		...	...	...
74	Washtenaw.....	17	17	...	...	...	...	3	...		...	...	...
75	Wayne.....	15	13	2	...	...	...	1	...		...	...	...
76	Wexford.....	1	1	...	...	...	...	...	...		...	...	...

NA Not available. [1]See table 3, footnote 4, and for counties, table 3, footnote 7. [2]See table 3, footnote 5.

BY INDUSTRY AND COUNTY: 1954

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued															
Crushed and broken stone			Sand and gravel			Clay, ceramic, and refractory minerals				Rock salt	Non-metallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels)			
Limestone		Granite	Common sand and gravel	Glass sand	Foundry sand	Fire clay		Clay, ceramic, and refractory minerals, n.e.c.				Gypsum		Peat	
Classified in mineral industries	Included in manufactures					Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures			Classified in mineral industries	Included in manufactures		
33	5	1	193	1	10	1	1	2	13	1	1	1	3	6	1
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2
3	...	...	4	...	...	...	...	...	...	...	...	...	...	...	3
1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	4
...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
1	...	...	4	...	...	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	8
...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	9
1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	10
2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	11
2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	12
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	14
1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16
...	...	...	2	...	...	...	...	...	...	...	1	...	...	...	17
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18
...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	19
1	...	1	3	...	...	...	...	...	...	...	...	...	...	...	20
1	...	...	2	...	...	1	...	...	2	...	...	...	...	...	21
1	1	...	1	...	...	...	...	...	1	...	...	...	...	...	22
...	...	...	9	...	...	...	...	...	...	...	...	...	...	...	23
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24
...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	25
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	26
...	...	...	2	...	...	...	...	...	1	...	...	...	...	...	27
...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	28
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29
1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	30
...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	31
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	32
...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	33
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	34
...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	35
2	...	...	5	...	...	...	...	...	...	...	...	...	...	...	36
4	...	...	3	...	...	...	...	...	...	...	...	...	...	1	37
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	38
1	...	...	10	...	...	...	...	...	...	...	...	...	2	...	39
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	41
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	42
...	1	...	7	...	...	...	...	...	2	...	...	...	...	...	43
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	44
2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	45
...	...	...	15	...	...	...	...	...	...	...	...	...	...	...	46
...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	47
...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	48
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	49
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	50
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	51
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	52
2	...	...	1	...	...	...	1	...	...	...	...	...	...	...	53
...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	54
...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	55
...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	56
...	...	...	19	...	...	...	...	...	1	...	...	...	...	1	57
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	58
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	59
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	60
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	61
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	62
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	63
1	...	...	4	...	1	...	...	...	...	...	...	...	...	...	64
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	65
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	66
...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	67
...	...	...	1	...	...	...	...	...	1	...	...	...	...	1	68
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	69
...	...	...	2	...	...	...	...	...	...	...	...	...	...	1	70
...	...	...	4	...	...	...	...	...	1	...	...	...	...	2	71
...	...	...	5	...	3	...	...	...	...	...	...	...	...	...	72
...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	73
...	...	...	14	...	...	...	...	...	...	...	...	...	...	...	74
1	...	...	8	1	...	...	...	1	2	1	...	...	...	...	75
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	76

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Michigan, all mineral operations:												
Including operations classified in manufactures	591	80	245	99	69	48	11	23	12	2	2	...
Mineral industries only	567	78	237	92	66	44	11	23	12	2	2	...
Metal mining, total	54	2	4	3	2	9	7	13	11	1	2	...
Iron ores	42	2	2	3	2	4	6	12	10	...	1	...
Copper ores	8	...	...	...	...	3	1	1	1	1	1	...
Metal mining contract services	4	...	2	...	...	2	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	262	51	120	38	32	16	2	3	...	...	...	...
Crude petroleum and natural gas	180	46	80	24	16	11	1	2	...	...	...	...
Natural gas liquids	3	...	1	1	1	...	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	46	1	19	9	11	4	1	1	...	...	...	...
Building, repairing, and dismantling rigs and derricks	3	...	2	1	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	30	4	18	3	4	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	275	27	121	58	35	23	2	7	1	1	...	...
Mineral industries only	251	25	113	51	32	19	2	7	1	1	...	...
Dimension stone:												
Limestone (included in manufactures)	1	...	...	1	...	...	...	...	...	...	...	...
Sandstone:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	33	12	12	1	2	1	1	2	1	1	...	...
Included in manufactures	5	2	...	...	3	...	...	...	...	...	...	...
Granite	1	...	...	...	1	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	193	12	90	48	25	14	1	3	...	...	...	...
Glass sand	1	...	...	...	...	1	...	...	...	...	...	...
Foundry sand	10	...	5	1	4	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	2	...	...	1	...	1	...	...	...	...	...	...
Included in manufactures	13	...	7	5	...	1	...	...	...	...	...	...
Rock salt	1	...	...	...	...	...	...	1	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	1	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum:												
Classified in mineral industries	1	...	...	...	...	...	...	1	...	...	...	...
Included in manufactures	3	...	...	...	...	3	...	...	...	...	...	...
Peat	6	1	3	...	...	2	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Michigan, total	13,729	149,074	32,985	2.40	221	30,679	4,880	11,987	56,746	2	87	7	4
Metal mining, total	8,690	73,958	16,739	1.93	226	13,937	416	11,420	23,364	3	97	(4)	...
Iron ores	6,514	59,050	1,155	0.18	20	474	416	10,297	4,337	47	51	2	...
Copper ores	2,094	14,120	15,577	7.44	1,103	13,462	...	1,123	19,020	...	100	...	...
Metal mining contract services	82	782	7	0.08	9	1	...	...	7	86	...	14	...
Crude petroleum and Natural gas extraction, total	1,837	[5]30,973	471	0.26	15	1,134	xxx	xxx	[6]9,226	13	8	47	32
Crude petroleum and natural gas	1,159	24,528	401	0.35	16	1,126	xxx	xxx	(NA)	...	. 6	70	[7]24
Oil and gas field contract services and Natural gas liquids:													
Drilling oil and gas wells	535	5,547	49	0.09	9	7	xxx	xxx	(NA)	...	14	30	[7]56
Oil and gas field contract services, n.e.c.	113	772	...	...	...	...	xxx	xxx	(NA)	...	...	...	...
Natural gas liquids and Building, repairing and dismantling rigs and derricks	30	[5]126	21	0.70	167	5	xxx	xxx	(NA)	76	...	24	...
Nonmetallic minerals (except fuels) mining, total	3,202	44,143	15,775	4.93	357	15,608	4,464	567	24,156	1	78	13	8
Crushed and broken limestone	1,301	16,030	8,972	6.90	560	8,972	...	536	8,972	...	88	...	12
Sand and gravel	1,464	19,260	6,787	4.64	352	6,620	4,446	...	15,150	3	64	31	2
Common sand and gravel	1,364	17,086	6,007	4.40	352	5,840	4,446	...	14,370	3	73	22	[8]2
Glass sand and Foundry sand	100	2,174	780	7.80	359	780	...	...	780	...	...	100	...
Other nonmetallic minerals (except fuels) mining	437	8,853	16	0.04	2	16	18	31	34	37	63	...	...

NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 352 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]Less than 0.5 percent.
[5]See table 2, footnote 5.
[6]For industries other than Natural gas liquids, includes water intake only.
[7]Includes "not specified" as follows: for the Crude petroleum and Natural gas industries 22 percent; for the Drilling oil and gas wells contract services industry, 29 percent.
[8]Represents "not specified."

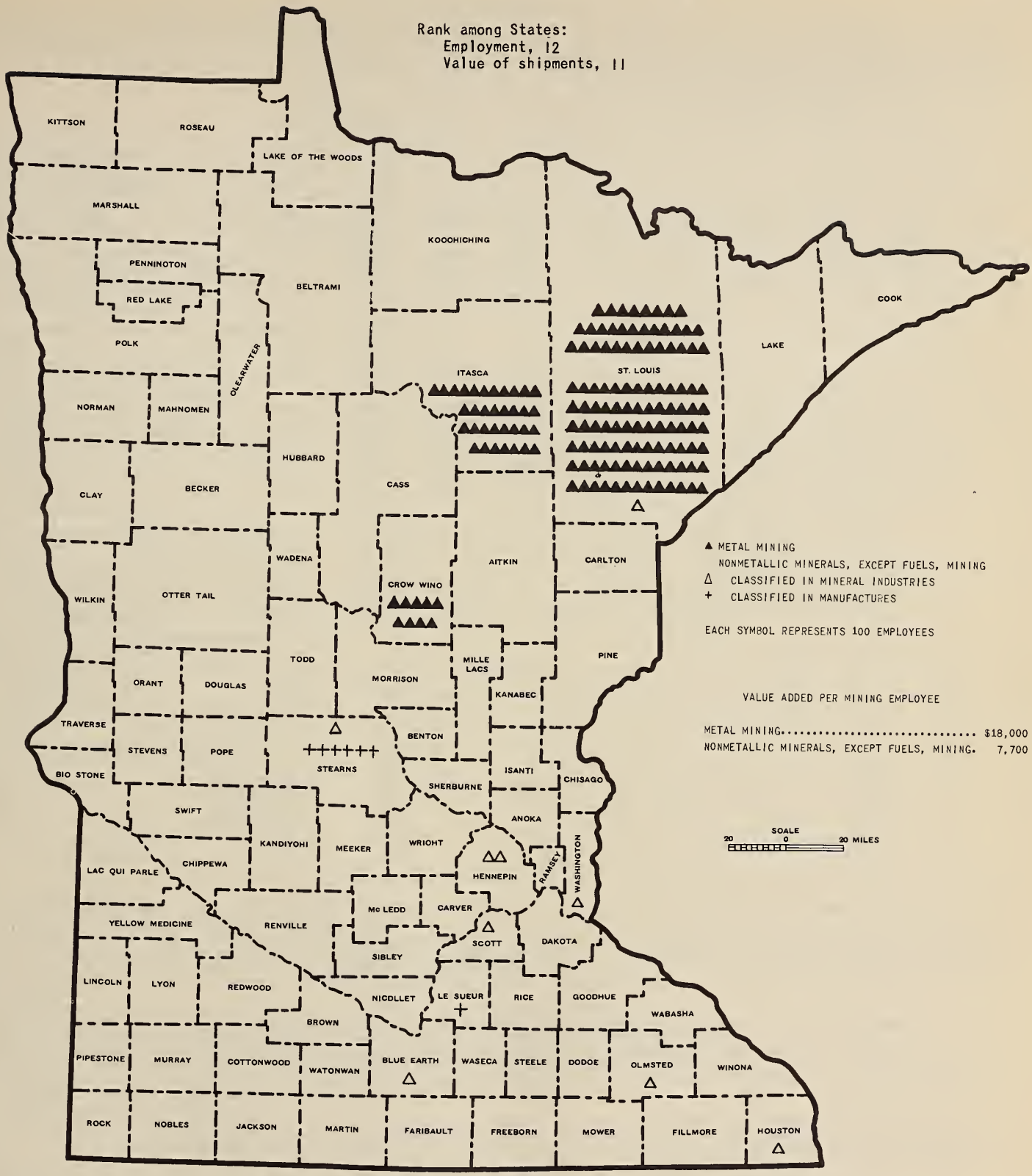
MINNESOTA

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MINING IN MINNESOTA: 1954

Rank among States:
Employment, 12
Value of shipments, 11



VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$18,000
NONMETALLIC MINERALS, EXCEPT FUELS, MINING	7,700



Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement and lime establishments					
	1954[1]	1939[2]	1929[3]	1954	1939[2 4]	1929[5]	1919	1909	1902[6]
Number of operating companies	200	120	(NA)	90	[7]73	(NA)	(NA)	[8]163	[8]270
Number of establishments	300	(NA)	150	146	(NA)	125	145	189	(NA)
Number of mines and quarries	363	178	176	212	124	147	206	260	[9]176
Number of preparation plants	222	87	(NA)	94	39	(NA)	(NA)	(NA)	(NA)
Value of shipments[10]....$1,000..	350,424	98,936	132,401	338,863	97,308	130,359	130,399	58,665	25,730
Value added in mining....do....	293,990	91,572	116,681	285,206	90,272	115,008	108,981	47,487	22,523
Number of persons engaged, total	17,952	8,210	13,000	16,758	7,773	12,665	18,864	18,394	10,552
Production and development workers	14,499	6,866	11,684	13,689	6,512	11,441	17,540	16,877	[11]9,877
All other employees	3,257	1,279	[12]1,289	3,016	1,222	1,202	1,284	1,346	675
Proprietors and firm members	196	65	[9]27	53	39	[9]22	40	171	(NA)
Performing manual labor	83	32	(NA)	22	23	(NA)	19	99	(NA)
Man-hours worked by production and development workers....1,000..	27,923	13,215	(NA)	26,146	12,554	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000..	173,301	20,749	37,256	166,247	19,918	36,160	54,343	24,932	10,249
Wages of production and development workers....do....	58,942	9,987	18,283	55,716	9,615	17,869	29,835	12,161	6,465
Salaries of all other employees....do....	19,502	3,398	[12]3,253	18,564	3,267	2,940	3,090	1,593	577
Minerals received for preparation....do....	5,138	(NA)	(NA)	49,220	(NA)	(NA)	...	...	(NA)
Supplies....do....	45,584	4,089	[13]9,580		3,950	[13]9,375	14,442	6,894	
Purchased fuel....do....	6,579	1,588	[9]2,786	5,818	1,500	[9]2,726	4,233	2,092	2,868
Purchased electric energy....do....	6,785	1,581	[9]1,874	6,612	1,507	[9]1,774	554		
Contract work....do....	30,771	106	1,480	30,317	79	1,476	2,189	2,192	339
Purchased machinery installed....do....	25,800		3,031	24,207		2,748	(NA)		
Capital expenditures, total....do....	64,223	(NA)	(NA)	62,517	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do....	17,736		5,651	17,667		5,651	11,537	(NA)	(NA)
Preparation plant construction....do....	23,529	368		23,058	358				
Other construction....do....	2,393		(NA)	2,377		(NA)	(NA)		
New machinery and equipment....do....	20,049	1,220		19,136	1,140				
Used plant and equipment....do....	516	178		279	144				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000..	1,240	318	210	1,120	297	198	148	154	[9]30
Per production worker	86	46	18	82	46	17	8	9	3
Prime movers....1,000..	880	175	111	772	162	107	116	152	[9]30
Electric motors driven by purchased energy....do....	360	143	99	348	135	91	32	2	...
Horsepower rating of electric motors driven by energy generated at establishment....do....	100	5	4	99	5	4	14	5	...
Energy used....million kwh equivalent..	2,713	1,715	3,963	2,483	1,682	3,895	(NA)		
Coal....1,000 short tons..	92	200	[9]470	90	198	[9]462	742		
Fuel oils....1,000 barrels..	716	26	[9]11	674	24	[9]11	1	(NA)	(NA)
Gas....million cu.ft..	92	...	...	59	...	...	...		
Electric energy purchased....million kwh..	419	94	[9]107	410	91	[9]103	(NA)		
Electric energy generated and used....do....	111	...	[9]4	110	...	[9]4	(NA)		

NA Not available.

[1]All figures except number of operating companies, number of establishments, and number of mines and quarries exclude data for 2 common clay pits operated as part of "Brick and hollow tile" establishments.

[2]Except, in part, for value of shipments and value added, excludes data for limestone and granite dimension stone dressing plants operated in conjunction with quarries. The value added in dressing granite at such operations was $51,000; this value has been included in the value of shipments and value added in mining. The comparable value for limestone is not available.

[3]Excludes data for clay mines operated as part of manufacturing establishments. There were about 6 such mines in 1939 with products valued at about $114,000.

[4]Includes data for one or more limestone quarries operated in conjunction with cement plants.

[5]Includes data for one limestone quarry operated as part of a cement establishment and one operated as part of a lime establishment.

[6]Includes data for 2 cement plants and an unknown number of lime plants producing lime valued at $76,000.

[7]May slightly understate the number of companies, since the figure represents the total number of operating companies for the State, including sand and gravel and common clay and shale operations, less the number of operating companies for such operations.

[8]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating establishments in more than one industry.

[9]Represents producing operations only.

[10]For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[11]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[12]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[13]Includes the cost of fuel and purchased electric energy for nonproducing establishments. Cost of supplies, fuel, and purchased electric energy for such operations was $125,000.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Minnesota, total		Metal mining		
		Including operations classified in manufactures[1]	Mineral industries only	Total	Iron ores	Ferro-alloy ores, n.e.c. and Metal mining contract services
1	Number of operating companies	200	192	33	26	8
2	Number of establishments	300	292	96	88	8
	Number of mines and quarries:					
3	1954	363	355	160	159	1
4	1939	178	(NA)	76	76	...
5	Number of preparation plants	222	216	59	59	...
	Value of shipments:					
6	1954.....$1,000	350,424	343,864	327,982	327,169	813
7	1939.....do	98,936	(NA)	96,426	[3]96,251	175
8	Value added in mining.....do	293,990	290,205	278,618	278,064	554
9	Number of persons engaged, total	[4]17,952	17,191	15,497	15,402	95
10	Production and development workers	14,499	13,849	12,605	12,520	85
11	All other employees	[4]3,257	3,146	2,884	2,878	6
12	Proprietors and firm members	196	196	8	4	4
13	Performing manual labor	83	83	5	2	3
	Man-hours worked by production and development workers:					
14	1954.....1,000	27,923	26,355	23,604	23,420	184
15	1939.....do	[5]13,215	(NA)	[3]11,951	[3]11,819	132
	At mines:					
16	Underground.....do	2,626	2,626	2,617	2,617	...
17	Open-pit.....do	11,934	11,690	10,398	10,336	62
18	Surface (mine shops, yards, etc.).....do	7,311	7,311	7,268	7,146	122
19	At preparation plants.....do	6,052	4,728	3,321	3,321	...
20	Man-hours spent on development and exploration work (included above).....do	6,011	6,010	6,007	6,007	...
21	Principal expenses designated below, total.....$1,000	[4]173,301	167,555	157,345	156,686	659
22	Wages of production and development workers.....do	58,942	56,495	51,715	51,341	374
23	Salaries of all other employees.....do	[4]19,502	18,977	17,901	17,857	44
24	Minerals received for preparation.....do	5,138	4,580	} 46,152	45,964	{ ...
25	Supplies.....do	45,584	43,714			{ 188
	Purchased fuel:					
26	Coal.....do	1,034	1,024	1,000	992	8
27	Fuel oil.....do	4,209	4,193	3,808	3,795	13
28	Gas.....do	100	98	} 616	602	{ ...
29	Other fuels.....do	1,236	1,205			{ 14
30	Purchased electric energy.....do	6,785	6,506	6,252	6,252	...
31	Contract work.....do	30,771	30,763	29,901	29,883	18
32	Purchased machinery installed.....do	25,800	25,622	23,697	23,564	133
33	Capital expenditures, total.....do	64,223	64,046	62,062	61,947	115
34	Development and exploration of mineral property.....do	17,736	17,733	17,655	17,655	...
35	Preparation plant construction.....do	23,529	23,526	23,028	23,028	...
36	Other construction.....do	2,393	2,393	2,373	2,364	9
37	New machinery and equipment.....do	20,049	19,878	18,744	18,678	66
38	Used plant and equipment.....do	516	516	262	222	40
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	1,240	1,229	1,033	1,025	8
40	Per production worker	86	89	82	82	94
41	Prime movers.....1,000	880	878	699	691	8
42	Electric motors driven by purchased energy.....do	360	351	334	334	...
43	Horsepower rating of electric motors driven by energy generated at establishment.....do	100	100	99	99	...
44	Energy used.....million kwh equivalent	2,712	2,645	2,312	2,297	15
45	Coal.....1,000 short tons	92	90	88	87	1
46	Fuel oil.....1,000 barrels	716	711	636	633	3
47	Gas.....million cu.ft	92	68	35	(D)	(D)
48	Electric energy purchased.....million kwh	419	391	378	378	...
49	Electric energy generated and used.....do	111	111	110	110	...
50	Water intake, including mine water used.....million gallons	16,429	15,122	10,345	10,333	12
51	Per production worker.....do	1.13	1.09	0.82	0.83	0.14

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available.

[1]See table 1, footnote 1.

[2]For 1939, represents common clay and shale; abrasive stones, natural; and peat. For 1954, excludes data for 2 common clay mines included in establishments classified in the manufacturing industries.

[3]Statistics for limestone operations are included with those for granite. Statistics for 1 nonproducing dimension granite operation are included with those for iron ore.

[4]Includes data for central office employees in the Crude petroleum industry.

[5]See table 1, footnote 2.

AND INDUSTRY, 1954, AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining									
Total		Dimension stone				Crushed and broken stone	Sand and gravel	Fire clay; Abrasive stones, natural; and Peat[2]	
		Total		Limestone	Granite				
Including operations classified in manufactures[1]	Mineral industries only	Including operations classified in manufactures	Mineral industries only						
168	160	17	11	5	12	28	121	3	1
204	196	19	13	5	14	28	152	3	2
203	195	19	13	5	14	30	149	3	3
102	(NA)	33	(NA)	2	31	12	48	9	4
163	157	6	...	4	2	26	128	3	5
22,442	15,882	6,824	264	1,317	5,507	3,878	11,561	179	6
2,510	(NA)	529	(NA)	(3)	[3]529	320	1,515	146	7
15,372	11,587	3,997	212	1,100	2,897	2,430	8,784	161	8
2,448	1,694	813	59	144	669	409	1,187	39	9
1,894	1,244	699	49	122	577	350	810	35	10
366	262	105	1	21	84	27	234	...	11
188	188	9	9	1	8	32	143	4	12
78	78	4	4	...	4	13	61	...	13
4,319	2,751	1,655	87	309	1,346	820	1,777	67	14
[5]1,264	(NA)	[3]356	(NA)	(3)	[3]356	215	564	129	15
9	9	...	...	...	...	...	9	...	16
1,536	1,292	331	87	110	221	364	808	33	17
43	43	...	...	...	...	43	...	...	18
2,731	1,407	1,324	...	199	1,125	413	960	34	19
4	3	1	...	1	...	...	3	...	20
15,930	10,210	5,896	176	864	5,032	2,889	7,028	117	21
7,227	4,780	2,572	125	488	2,084	1,330	3,226	99	22
1,575	1,076	500	1	153	347	163	912	...	23
} 4,570	2,142	2,459	31	150	2,309	{ ...	} 1,502	{ ...	24
						{ 599		{ 10	25
34	24	10	...	2	8	...	24	...	26
401	385	21	5	...	21	151	224	5	27
} 720	687	{ 2	...	2	...	...	16	} 3	28
		{ 32	1	26	6	170	497		29
533	254	292	13	35	257	68	173	...	30
870	862	8	...	8	...	408	454	...	31
2,103	1,925	183	5	48	135	327	1,593	...	32
2,161	1,984	180	3	54	126	275	1,706	...	33
81	78	3	...	3	...	9	69	...	34
501	498	3	...	3	...	27	471	...	35
20	20	...	...	...	...	4	16	...	36
1,305	1,134	172	1	48	124	220	913	...	37
254	254	2	2	...	2	15	237	...	38
207	196	12	1	3	9	60	120	15	39
109	158	17	20	25	16	171	148	429	40
181	179	2	...	1	1	56	108	15	41
26	17	10	1	2	8	4	12	...	42
1	1	...	...	...	...	...	1	...	43
400	333	70	3	23	47	98	230	2	44
4	2	2	...	1	1	...	2	...	45
80	75	6	1	...	6	31	42	1	46
57	33	24	...	24	...	...	33	...	47
41	13	29	1	1	28	3	9	...	48
1	1	...	...	...	...	...	1	...	49
6,084	4,777	1,307	...	(D)	(D)	187	4,587	3	50
3.21	3.84	1.87	...	(D)	(D)	0.53	5.66	0.09	51

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees		Man-hours worked by production and development workers (1,000)	Wages and salaries		New capital expenditures ($1,000)
				Production and development workers	All other employees		Production and development workers ($1,000)	All other employees ($1,000)	
Minnesota, all mineral operations:									
Including operations in manufactures[1]	300	350,424	293,990	14,499	[2]3,257	27,923	58,942	[2]19,502	63,707
Mineral industries only	292	343,864	290,205	13,849	3,146	26,355	56,495	18,977	63,530
Metal mining	96	327,982	278,618	12,605	2,884	23,604	51,715	17,901	61,800
Iron ores	88	327,169	278,064	12,520	2,878	23,420	51,341	17,857	61,725
Ferro-alloy ores, n.e.c. and Metal mining contract services	8	813	554	85	6	184	374	44	75
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures[1]	204	22,442	15,372	1,894	366	4,319	7,227	1,575	1,907
Mineral industries only	196	15,882	11,587	1,244	262	2,751	4,780	1,076	1,730
Dimension stone:									
Including operations in manufactures	19	6,824	3,997	699	105	1,655	2,572	500	178
Mineral industries only	13	264	212	49	1	87	125	1	1
Crushed and broken stone	28	3,878	2,430	350	27	820	1,330	163	260
Sand and gravel	152	11,561	8,784	810	234	1,777	3,226	912	1,469
Fire clay; Abrasive stones. natural; and Peat	3	179	161	35	...	67	99	...	...
COUNTY									
Blue Earth (mineral industries only)	5	723	667	39	14	84	165	72	118
Brown (mineral industries only)	3	153	118	11	...	25	47	...	41
Clay (sand and gravel)	6	148	108	20	4	34	67	23	3
Crow Wing (iron ores and metal mining contract services)	15	13,361	11,265	786	128	1,376	3,031	791	3,519
Dakota	4	436	265	38	4	78	172	33	20
Fillmore	6	1,284	851	57	5	117	191	30	65
Freeborn (sand and gravel)	3	146	103	19	2	45	61	4	5
Goodhue	8	335	229	42	...	68	128	...	1
Hennepin	11	2,863	2,297	132	36	324	654	203	265
Houston	4	562	363	77	8	235	295	22	48
Itasca, total	24	74,588	64,748	2,925	493	5,436	11,822	2,936	15,657
Metal mining	20	74,469	64,643	2,909	493	5,409	11,766	2,936	15,620
Nonmetallic minerals (except fuels) mining	4	119	105	16	...	27	56	...	37
Kandiyohi (sand and gravel)	3	260	217	20	...	42	64	...	...
Lac qui Parle	5	182	133	25	1	50	78	3	1
Le Sueur (mineral industries only)	5	154	158	28	2	62	105	12	378
Olmsted	4	832	651	89	6	173	354	60	118
Ramsey (including operations in manufactures)	4	282	250	19	7	35	68	26	...
Renville (sand and gravel)	5	348	259	29	1	80	127	2	35
Rice	5	152	133	9	2	24	29	3	8
Rock	4	311	257	31	1	63	96	3	11
St. Louis, total	71	240,055	203,217	8,964	2,268	16,941	37,141	14,202	42,640
Metal mining	58	239,112	202,532	8,872	2,256	16,741	36,758	14,141	42,601
Nonmetallic minerals (except fuels) mining	13	943	685	92	12	200	383	61	39
Scott	8	614	599	36	51	74	158	71	249
Stearns (mineral industries only)	6	498	229	51	45	117	227	131	1
Steele	4	540	418	41	4	93	133	19	66
Washington	5	1,723	999	73	51	176	400	296	110
Winona (including operations in manufactures)	3	466	363	53	3	120	190	9	18

[1]See table 1, footnote 1.
[2]See table 2, footnote 4.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries, represents total number of establishments; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry)

Industry group and industry or subindustry	Minnesota, total	Becker	Beltrami	Big Stone	Blue Earth	Brown	Carlton	Carver	Chippewa	Chisago	Clay	Cottonwood
All operations, total	300	2	1	1	6	4	4	1	2	1	6	1
Classified in mineral industries	292	2	1	1	5	3	4	1	2	1	6	1
Included in manufactures	8	...	...	...	1	1	...	...	...	...	...	...
Metal mining:												
Iron ores	88	...	...	...	...	...	...	...	...	...	...	...
Nickel ores	1	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	7	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	1	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	4	...	...	...	1	...	...	...	...	...	...	...
Granite:												
Classified in mineral industries	12	...	...	1	...	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	26	...	...	...	2	...	...	...	...	...	...	...
Granite	2	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	149	2	1	...	3	3	3	1	2	1	6	1
Glass sand	1	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	2	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay	1	...	...	...	...	...	...	...	...	...	...	...
Common clay included in manufactures	2	...	...	...	...	1	...	...	...	...	...	...
Abrasive stones, natural	1	...	...	...	...	...	...	...	...	...	...	...
Peat	1	...	...	...	...	...	1	...	...	...	...	...

Industry group and industry or subindustry	Crow Wing	Dakota	Dodge	Faribault	Fillmore	Freeborn	Goodhue	Grant	Hennepin	Houston	Isanti	Itasca
All operations, total	15	4	1	1	6	3	8	1	11	4	1	24
Classified in mineral industries	15	4	1	1	6	3	8	1	11	4	1	24
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining:												
Iron ores	13	...	...	...	1	...	...	...	...	...	...	18
Nickel ores	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	2	...	...	...	1	...	...	...	...	...	...	2
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Granite:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	...	1	1	...	4	...	1	...	1	4	...	1
Granite	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	...	3	...	1	...	3	6	1	10	...	1	3
Glass sand	...	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay	...	...	...	...	...	...	1	...	...	...	...	...
Common clay included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Abrasive stones, natural	...	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...

Industry group and industry or subindustry	Jackson	Kandiyohi	Kittson	Lac qui Parle	Lake	Le Sueur	Lincoln	Lyon	McLeod	Marshall	Martin	Meeker
All operations, total	1	3	1	5	1	7	1	2	1	1	1	2
Classified in mineral industries	1	3	1	5	1	5	1	2	1	1	1	2
Included in manufactures	...	...	...	...	...	2	...	...	...	...	...	...
Metal mining:												
Iron ores	...	...	...	...	...	...	...	...	...	...	...	...
Nickel ores	...	...	...	...	1	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	2	...	...	...	...	...	...
Granite:												
Classified in mineral industries	...	...	...	3	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	...	...	...	...	...	...	...	...	...	...	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	1	3	1	2	...	5	1	2	1	1	1	2
Glass sand	...	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...
Common clay included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Abrasive stones, natural	...	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954--Continued

(For operations classified in the mineral industries, represents total number of establishments; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry)

Item	Mille Lacs	Morrison	Mower	Murray	Nicollet	Nobles	Olmsted	Otter Tail	Pennington	Pine	Pipestone	Polk
All operations, total	2	1	2	2	3	2	4	2	1	2	2	3
Classified in mineral industries	2	1	2	2	3	2	4	2	1	2	2	3
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining:												
Iron ores	...	...	...	...	...	...	...	...	...	...	...	...
Nickel ores	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Granite:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	...	...	2	...	...	...	3	...	...	...	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	2	1	...	2	3	2	1	2	1	1	2	3
Glass sand	...	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	1	...	...
Clay, ceramic, and refractory minerals:												
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...
Common clay included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Abrasive stones, natural	...	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...

Item	Pope	Ramsey	Redwood	Renville	Rice	Rock	Roseau	St. Louis	Scott	Sherburne	Sibley	Stearns
All operations, total	2	4	5	5	5	4	1	71	8	1	1	8
Classified in mineral industries	2	3	5	5	5	4	1	71	8	1	1	6
Included in manufactures	...	1	...	...	...	...	...	...	...	...	...	2
Metal mining:												
Iron ores	...	...	...	...	...	...	...	56	...	...	...	...
Nickel ores	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	2	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Limestone:												
Classified in mineral industries	...	1	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Granite:												
Classified in mineral industries	...	...	3	...	...	...	...	2	...	...	...	3
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	2
Crushed and broken stone:												
Limestone	...	...	...	...	2	...	...	...	1	...	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...	1
Sand and gravel:												
Common sand and gravel	2	...	2	5	3	3	1	11	7	1	1	2
Glass sand	...	1	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	1	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...
Common clay included in manufactures	...	1	...	...	...	...	...	...	...	...	...	...
Abrasive stones, natural	...	...	...	...	...	1	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...

Item	Steele	Stevens	Swift	Todd	Wabasha	Wadena	Waseca	Washington	Watonwan	Wilkin	Winona	Wright	Yellow Medicine
All operations, total	4	1	3	1	1	1	1	5	1	1	3	2	1
Classified in mineral industries	4	1	3	1	1	1	1	5	1	1	2	2	1
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1	...	...
Metal mining:													
Iron orea	...	...	...	...	...	...	...	...	...	...	...	...	...
Nickel ores	...	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:													
Dimension stone:													
Limestone:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1	...	...
Granite:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:													
Limestone	1	...	...	...	...	...	...	1	...	...	1	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...	...	1
Sand and gravel:													
Common aand and gravel	3	1	3	1	1	1	1	4	1	1	1	2	...
Glasa sand	...	...	...	...	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:													
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...	...
Common clay included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Abrasive stones, natural	...	...	...	...	...	...	...	...	...	...	...	...	...
Peat	...	...	...	...	...	...	...	...	...	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Minnesota, all mineral operations:												
Including operations classified in manufactures	300	20	95	50	47	28	22	27	8	...	2	1
Mineral industries only	292	20	95	48	45	27	21	26	7	...	2	1
Metal mining, total	96	2	11	6	11	12	18	26	7	...	2	1
Iron ores	88	2	8	5	9	10	18	26	7	...	2	1
Nickel ores	1	...	...	...	1	...	...	...	...	...	...	...
Metal mining contract services	7	...	3	1	1	2	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	204	18	84	44	36	16	4	1	1	...	...	...
Mineral industries only	196	18	84	42	34	15	3	...	...	...	...	...
Dimension stone:												
Limestone:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	4	...	...	1	1	1	1	...	...	...	...	...
Granite:												
Classified in mineral industries	12	...	8	3	1	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	...	...	1	1	...	...	...
Crushed and broken stone:												
Limestone	26	...	8		6	5	1	...	...	...	...	...
Granite	2	1	...	...	...	1	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	149	17	64	32	25	9	2	...	...	...	...	...
Glass sand	1	...	1	...	...	...	...	...	...	...	...	...
Foundry sand	2	...	1	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Classified in mineral industries	1	...	...	...	1	...	...	...	...	...	...	...
Included in manufactures	2	...	...	1	1	...	...	...	...	...	...	...
Abrasive stones, natural	1	...	...	...	1	...	...	...	...	...	...	...
Peat	1	...	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Minnesota, total	13,849	290,205	10,202	0.74	35	7,835	4,920	34,353	31,695	26	46	27	1
Metal mining, total	12,605	278,618	6,122	0.49	22	4,172	4,223	34,273	26,056	43	42	15	(1)
Iron ores	12,520	278,064	6,110	0.49	22	4,160	4,223	34,261	26,044	43	42	15	(1)
Ferro-alloy ores, n.e.c. and Metal mining contract services	85	554	12	0.14	22	12	...	12	12	8	77	15	(1)
Nonmetallic minerals (except fuels) mining, total	1,244	11,587	4,080	3.28	352	3,663	697	80	5,639	...	51	46	[2]3
Dimension stone	49	212	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone	350	2,430	98	0.28	40	98	89	80	231	...	...	...	[2]100
Sand and gravel	810	8,784	3,979	4.91	453	3,564	608	...	5,403	...	52	46	2
Fire clay; Abrasive stones, natural; and Peat	35	161	3	0.09	19	1	...	...	5	...	...	100	...

[1]Less than 0.5 percent.
[2]Includes "not specified" as follows: for Nonmetallic minerals (except fuels) mining, 1 percent; and for Crushed and broken stone, 28 percent.

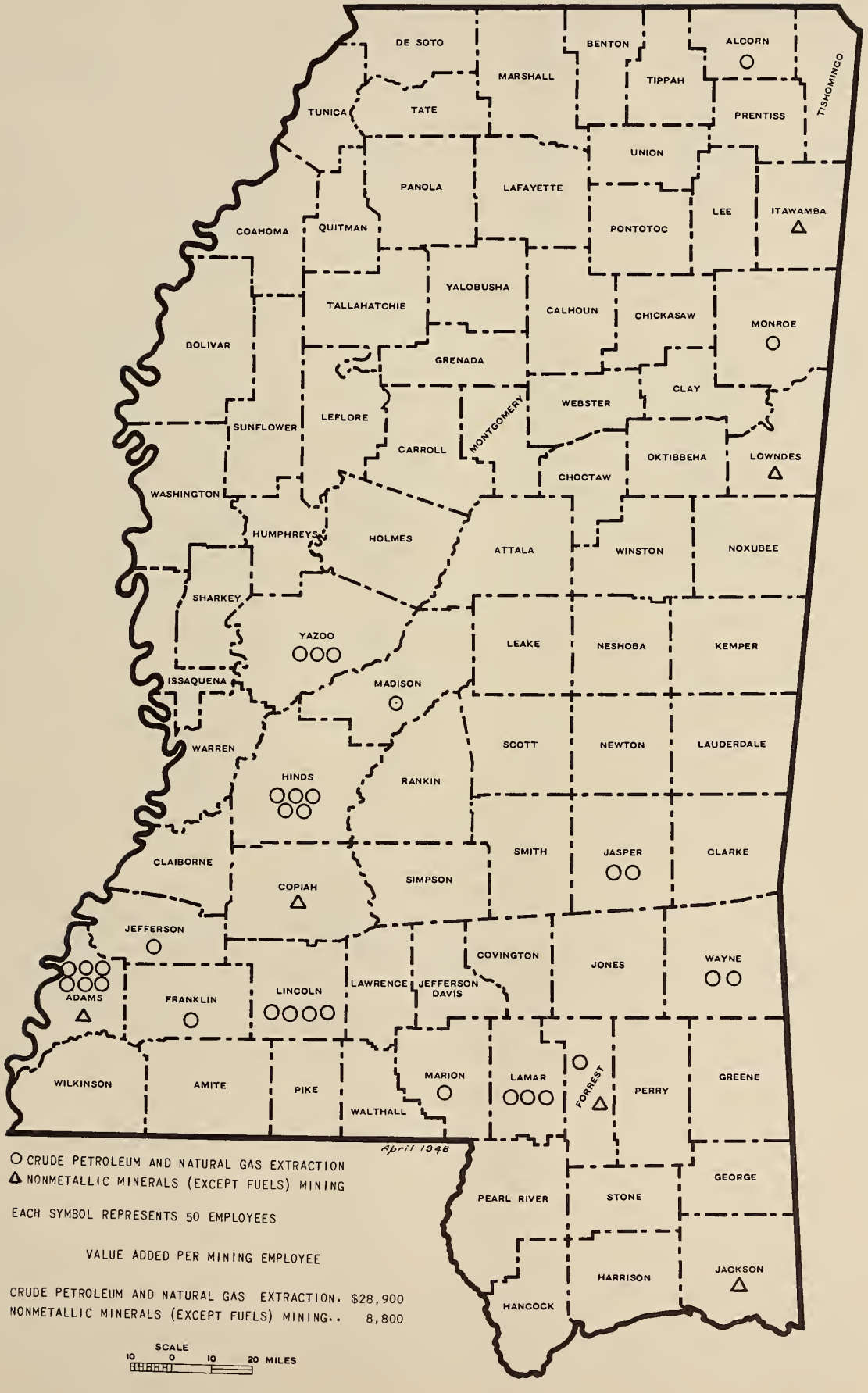
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MISSISSIPPI

123-1

MINING IN MISSISSIPPI: 1954

Rank among States:
Employment, 32
Value of shipments, 25



VALUE ADDED PER MINING EMPLOYEE

CRUDE PETROLEUM AND NATURAL GAS EXTRACTION.	$28,900
NONMETALLIC MINERALS (EXCEPT FUELS) MINING..	8,800

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes common clay and shale and contract service operations)

Item	Comparative statistics for all operations[1]		Comparative statistics excluding the crude petroleum and natural gas extraction and common clay and shale industries		
	1954	1939[2]	1954[3]	1939	1929[4]
Number of operating companies	207	58	43	24	(NA)
Number of establishments	226	(NA)	49	(NA)	13
Number of mines and quarries	61	45	49	39	16
Number of oil and gas wells producing at end of year	1,864	47	xxx	xxx	xxx
Number of preparation plants	37	37	34	37	(NA)
Value of shipments[5]....$1,000	120,993	2,139	9,535	1,393	1,109
Value added in mining....do	94,855	1,079	6,752	1,071	774
Number of persons engaged, total	3,998	716	810	560	415
Production and development workers	3,128	589	694	487	362
All other employees	717	106	74	62	[6]52
Proprietors and firm members	153	21	42	11	1
Performing manual labor	57	6	17	3	(NA)
Man-hours worked by production and development workers....1,000	6,418	1,173	1,589	996	(NA)
Principal expenses designated below, total....$1,000	53,606	1,719	4,949	752	780
Wages of production and development workers....do	11,754	429	1,990	288	328
Salaries of all other employees....do	3,937	229	185	142	[6]117
Minerals received for preparation....do	16,701	(NA)	...	(NA)	(NA)
Supplies....do		274	1,648	152	175
Fuel[7]....do	1,738	169	489	92	89
Purchased electric energy....do	390	72	184	72	67
Contract work....do	19,086	546	453	6	4
Purchased machinery installed....do	11,272		872		81
Capital expenditures, total....do	23,049	(NA)	863	(NA)	(NA)
Development and exploration of mineral property....do	12,361		...		1
Preparation plant construction....do	154	18	18	13	(NA)
Other construction....do	2,445		21		
New machinery and equipment....do	7,220	244	709	81	
Used plant and equipment....do	869	55	115	43	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	252	14	40	12	7
Per production worker	81	24	58	25	19
Prime movers....1,000	233	9	29	7	5
Electric motors driven by purchased energy....do	19	5	11	5	2
Horsepower rating of electric motors driven by energy generated at establishment....do	1	...	...	...	...
Energy used....million kwh equivalent	3,970	184	219	64	90
Coal....1,000 short tons	2	3	2	3	8
Fuel oils....1,000 barrels	105	79	52	15	14
Gas[8]....million cu.ft	11,532	29	178	4	...
Electric energy purchased....million kwh	27	4	13	4	3
Electric energy generated and used....do	7	...	...	...	...

xxx Not applicable.
NA Not available.

[1]Only 2 establishments were reported in Mississippi for 1919 and none for 1909 or 1902.
[2]Excludes data for 2 oil and gas field contract service establishments.
[3]Excludes data for one limestone quarry and one fire clay mine.
[4]All figures except number of establishments include data for one limestone quarry in Louisiana.
[5]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and may contain some duplication due to the transfer of crude minerals from one establishment to another for preparation. For all other years the figures represent net production and exclude such duplication.
[6]Excludes data for employees at central offices, if any, not included in reports for mining and mineral preparation establishments.
[7]For 1954, represents purchased fuels only. For 1939 and 1929, includes the value of fuels produced and used at the same establishment for power or heat.
[8]Includes gas produced and used for power or heat at the same establishment.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Mississippi, total		Crude petroleum and natural gas extraction		
		Including operations classified in manufactures	Mineral industries only	Total	Crude petroleum	Natural gas
1	Number of operating companies	207	195	153	104	8
2	Number of establishments	226	214	165	110	8
	Number of mines, quarries, and producing oil and gas wells:					
3	1954	1,925	1,913	1,864	1,764	54
4	1939	92	(NA)	47	(NA)	(NA)
5	Number of preparation plants	37	37	3	...	...
	Value of shipments:[1]					
6	1954 ..... $1,000	120,993	120,233	110,698	91,648	3,010
7	1939 ..... do	[2]2,139	(NA)	712	[3]712	([3])
8	Value added in mining ..... do	94,855	94,282	[5]87,530	73,913	2,961
9	Number of persons engaged, total	3,998	3,946	3,136	1,621	66
10	Production and development workers	3,128	3,076	2,382	1,003	54
11	All other employees	717	717	643	566	6
12	Proprietors and firm members	153	153	111	52	6
13	Performing manual labor	57	57	40	11	1
	Man-hours worked by production and development workers:					
14	1954 1,000	6,418	6,316	4,727	2,110	117
15	1939 ..... do	[2]1,173	(NA)	133	[3]133	([3])
	At mines:					
16	Underground ..... do	63	63	xxx	xxx	xxx
17	Open-pit ..... do	797	695	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.) ..... do	10	10	xxx	xxx	xxx
19	At preparation plants ..... do	919	919	98	xxx	xxx
20	At oil and gas field operations ..... do	4,629	4,629	4,629	2,110	117
21	Man-hours spent on development and exploration work (included above) ..... do	2,423	2,423	[5]2,423	875	95
22	Principal expenses designated below, total $1,000	53,606	53,285	[5]48,336	35,682	1,998
23	Wages of production and development workers ..... do	11,754	11,620	9,630	4,707	295
24	Salaries of all other employees ..... do	3,937	3,937	3,752	3,300	30
25	Minerals received for preparation ..... do	} 16,701	16,514	[5]14,866	{ xxx	xxx
26	Supplies ..... do				9,786	538
	Purchased fuel:					
27	Coal ..... do	14	14	...	...	...
28	Fuel oils ..... do	524	524	294	85	...
29	Gas ..... do	401	401	347	234	([9])
30	Other fuels ..... do	799	799	608	294	6
31	Purchased electric energy ..... do	390	390	206	199	2
32	Contract work ..... do	19,086	19,086	18,633	17,077	1,127
33	Purchased machinery installed ..... do	11,272	11,272	10,400	7,642	758
34	Capital expenditures, total ..... do	23,049	23,049	22,186	17,582	2,382
35	Development and exploration of mineral property ..... do	12,361	12,361	12,361	10,960	1,323
36	Preparation plant construction ..... do	154	154	136	xxx	xxx
37	Other construction ..... do	2,445	2,445	2,424	1,537	727
38	New machinery and equipment ..... do	7,220	7,220	6,511	5,046	332
39	Used plant and equipment ..... do	869	869	754	39	...
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	252	252	212	127	...
41	Per production worker	81	82	89	127	...
42	Prime movers 1,000	233	233	204	119	...
43	Electric motors driven by purchased energy ..... do	19	19	8	8	([9])
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	1	1	1	...	...
45	Energy used ..... million kwh equivalent	3,970	3,970	3,751	2,237	154
	Produced and used for fuel:					
46	Natural gas ..... million cu.ft	9,261	9,261	9,261	5,818	496
	Purchased fuel:					
47	Coal ..... 1,000 short tons	2	2	...	...	...
48	Fuel oil ..... 1,000 barrels	105	105	53	17	...
49	Gas ..... million cu.ft	2,271	2,271	2,093	1,071	2
50	Electric energy purchased ..... million kwh	27	27	14	14	([9])
51	Electric energy generated and used ..... do	7	7	7	...	...
52	Water intake, including mine water used ..... million gallons	5,582	5,582	666	343	...
53	Per production worker ..... do	1.78	1.81	0.28	0.34	...

D Withheld to avoid approximately disclosing data for individual companies. NA Not available. xxx Not applicable. [1]See table 1, footnote 5. [2]See table 1, footnote 2. [3]Figures for the Natural gas industry are included with those for the Crude petroleum industry. [4]Figures for one mine in the Kaolin and ball clay industry are included with the figures for Bentonite.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction—Continued				Nonmetallic minerals (except fuels) mining					
	Oil and gas field contract services			Total					
Natural gas liquids	Drilling oil and gas wells	Building, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Including operations classified in manufactures	Mineral industries only	Sand and gravel	Bentonite	Other industries (including operations classified in manufactures)	
3	19	3	21	54	42	35	5	17	1
3	20	3	21	61	49	37	7	17	2
...	46	...	...	61	49	38	7	16	3
xxx	(NA)	(NA)	(NA)	45	(NA)	34	4	7	4
3	...	...	...	34	34	29	4	1	5
2,340	10,628	198	2,874	10,295	9,535	5,561	3,047	1,687	6
...	(2)	(2)	(2)	1,427	(NA)	1,160	[4]233	[4]34	7
([5])	6,672	180	2,200	7,325	6,752	3,880	2,281	1,164	8
56	911	36	446	862	810	580	146	136	9
49	831	29	416	746	694	482	139	125	10
7	53	3	8	74	74	60	7	7	11
...	27	4	22	42	42	38	...	4	12
...	13	3	12	17	17	13	...	4	13
98	1,571	23	808	1,691	1,589	1,122	306	263	14
...	(2)	(2)	(2)	1,040	(NA)	874	[4]122	[4]44	15
xxx	xxx	xxx	xxx	63	63	5	...	58	16
xxx	xxx	xxx	xxx	797	695	[6]504	157	136	17
xxx	xxx	xxx	xxx	10	10	(NA)	...	10	18
98	xxx	xxx	xxx	821	821	613	149	59	19
...	1,571	23	808	xxx	xxx	xxx	xxx	xxx	20
(NA)	1,355	23	75	...	...	...	...	...	21
[5]656	7,610	109	1,813	5,270	4,949	3,143	1,159	968	22
241	3,211	79	1,097	2,124	1,990	1,332	388	404	23
52	332	12	26	185	185	123	22	40	24
([5])	xxx	xxx	xxx	...	...	(NA)	...	...	25
281	3,290	14	489	[7]1,835	1,648	989	381	465	26
...	...	...	...	[7]14	14	14	...	...	27
...	207	...	2	[7]230	230	179	31	20	28
...	113	...	...	[7]54	54	2	52	...	29
2	152	4	150	[7]191	191	177	3	11	30
5	...	...	...	[7]184	184	126	30	28	31
75	305	...	49	[7]453	453	201	252	...	32
55	1,785	4	156	[8]872	872	638	98	136	33
150	1,896	4	172	[8]863	863	645	81	137	34
...	78	...	...	...	...	...	...	...	35
136	...	...	...	[8]18	18	8	10	...	36
...	1,146	4	...	[8]21	21	20	...	1	37
14			129	[8]709	709	597	(D)	(D)	38
...	672	...	43	[8]115	115	20	(D)	(D)	39
9	58	...	18	[8]40	40	31	6	3	40
176	70	...	43	54	58	64	44	22	41
9	58	...	18	[8]29	29	24	3	2	42
...	...	...	...	[8]11	11	7	3	1	43
1	...	...	...	([9])	...	([9])	...	...	44
908	413	1	38	[8]219	219	136	71	12	45
2,947	...	...	...	xxx	xxx	xxx	xxx	xxx	46
...	...	...	...	[8]2	2	2	...	...	47
...	36	...	([9])	[8]52	52	38	9	5	48
...	1,020	...	...	[8]178	178	6	172	...	49
([9])	...	...	...	[8]13	13	10	2	1	50
7	...	...	...	...	...	...	...	...	51
285	25	...	13	[8]4,916	4,916	4,906	10	...	52
5.82	0.03	...	0.03	6.59	7.08	10.18	0.07	...	53

[5]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistica shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown for these industries. [6]Includes man-hours worked on floating equipment. [7]Figures for fuels, electric energy, and contract works for crushed stone and clay operations classified in manufactures are included with figures for supplies. [8]Excludes data for crushed stone and clay operations classified in manufactures. [9]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Mississippi, all mineral operations:									
Including operations in manufactures	226	120,993	94,855	3,128	717	6,418	11,754	3,937	22,180
Mineral industries only:									
Including crude petroleum and natural gas	214	120,233	94,282	3,076	717	6,316	11,620	3,937	22,180
Excluding crude petroleum and natural gas	49	9,535	6,752	694	74	1,589	1,990	185	748
Crude petroleum and natural gas extraction, total	165	110,698	[2]87,530	2,382	643	4,727	9,630	3,752	21,432
Crude petroleum and natural gas[3]	[3]118	94,658	76,874	1,057	572	2,227	5,002	3,330	19,925
Natural gas liquids	3	2,340	([2])	49	7	98	241	52	150
Oil and gas field contract services[4]	44	13,700	9,052	1,276	64	2,402	4,387	370	1,357
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	61	10,295	7,325	746	74	1,691	2,124	185	[5]748
Mineral industries only	49	9,535	6,752	694	74	1,589	1,990	185	748
Sand and gravel	37	5,561	3,880	482	60	1,122	1,332	123	625
Bentonite	7	3,047	2,281	139	7	306	388	22	74
Clay, ceramic, and refractory minerals and Other industries	17	1,687	1,164	125	7	263	404	40	49
COUNTY									
Adams	45	(NA)	(NA)	[6]445	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	42	(NA)	(NA)	[6]314	([6])	(NA)	(NA)	(NA)	(NA)
Copiah	4	665	497	63	2	149	179	11	51
Forrest (mineral industries only)	5	(NA)	(NA)	[6]99	([6])	(NA)	(NA)	(NA)	(NA)
Franklin	15	(NA)	(NA)	[6]47	([6])	(NA)	(NA)	(NA)	(NA)
Harrison	4	(NA)	(NA)	[6]20	([6])	(NA)	(NA)	(NA)	(NA)
Hinds	17	(NA)	(NA)	[6]283	([6])	(NA)	(NA)	(NA)	(NA)
Jasper	23	(NA)	(NA)	[6]109	([6])	(NA)	(NA)	(NA)	(NA)
Jefferson	15	(NA)	(NA)	[6]34	([6])	(NA)	(NA)	(NA)	(NA)
Jefferson Davis	5	(NA)	(NA)	[6]13	([6])	(NA)	(NA)	(NA)	(NA)
Jones (mineral industries only)	7	(NA)	(NA)	[6]24	([6])	(NA)	(NA)	(NA)	(NA)
Lamar	10	(NA)	(NA)	[6]146	([6])	(NA)	(NA)	(NA)	(NA)
Lincoln (mineral industries only)	14	(NA)	(NA)	[6]224	([6])	(NA)	(NA)	(NA)	(NA)
Lowndes (Sand and gravel only)	4	436	343	55	9	87	87	25	51
Madison	7	(NA)	(NA)	[6]39	([6])	(NA)	(NA)	(NA)	(NA)
Marion	10	(NA)	(NA)	[6]41	([6])	(NA)	(NA)	(NA)	(NA)
Monroe	8	(NA)	(NA)	[6]73	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	3	(NA)	(NA)	[6]29	([6])	(NA)	(NA)	(NA)	(NA)
Rankin (mineral industries only)	4	(NA)	(NA)	[6]30	([6])	(NA)	(NA)	(NA)	(NA)
Wayne	15	(NA)	(NA)	[6]119	([6])	(NA)	(NA)	(NA)	(NA)
Wilkinson	8	(NA)	(NA)	[6]11	([6])	(NA)	(NA)	(NA)	(NA)
Yazoo	29	(NA)	(NA)	[6]154	([6])	(NA)	(NA)	(NA)	(NA)

NA Not available.

[1]See table 1, footnote 5.

[2]See table 2, footnote 5.

[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.

[4]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for such companies is included with the county data for the Crude petroleum and Natural gas industries.

[5]See table 2, footnote 8.

[6]Figures for "All other employees" are included with those for "Production and development workers."

[7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All mineral operations			Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining										
							Crushed and broken limestone		Sand and gravel			Clay, ceramic, and refractory minerals					Nonmetallic minerals (except fuels) contract services
	Total	Classified in mineral industries	Included in manufactures	Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Classified in mineral industries	Included in manufactures	Common sand and gravel	Glass sand	Foundry sand	Bentonite	Fire clay	Fuller's earth	Kaolin and ball clay	Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	
Mississippi, total	226	214	12	118	3	44	1	1	35	1	1	7	1	1	2	10	1
Adams	45	45	...	42	1	(NA)	...	...	2	...	...	...	...	...	...	...	...
Alcorn	2	1	1	...	...	(NA)	...	...	...	...	1	...	...	...	...	1	...
Amite	1	1	...	1	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Bolivar	...	...	...	...	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Carroll	1	1	...	...	...	(NA)	...	...	...	...	...	...	...	1	...	...	...
Clarke	2	2	...	2	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Clay	1	1	...	...	...	(NA)	...	...	1	...	...	...	...	...	...	...	...
Copiah	4	4	...	...	...	(NA)	...	...	4	...	...	...	...	...	...	...	...
De Soto	2	2	...	...	...	(NA)	...	...	2	...	...	...	...	...	...	...	...
Forrest	6	5	1	4	...	(NA)	...	...	1	...	...	...	...	...	...	1	...
Franklin	15	15	...	15	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
George	1	1	...	...	...	(NA)	...	...	1	...	...	...	...	...	...	...	...
Greene	1	1	...	1	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Grenada	2	2	...	1	...	(NA)	...	...	1	...	...	...	...	...	...	...	...
Harrison	4	4	...	1	...	(NA)	...	...	3	...	...	...	...	...	...	...	...
Hinds	19	17	2	15	...	(NA)	...	...	2	...	...	...	...	...	...	2	...
Holmes	1	1	...	...	...	(NA)	...	...	1	...	...	...	...	...	...	...	...
Itawamba	3	3	...	...	...	(NA)	...	...	...	...	...	3	...	...	...	...	...
Jackson	1	1	...	...	...	(NA)	1	...	...	...	...	...	...	...	...	...	...
Jasper	23	23	...	23	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Jefferson	15	15	...	15	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Jefferson Davis	5	5	...	4	1	(NA)	...	...	...	...	...	...	...	...	...	...	...
Jones	8	7	1	7	...	(NA)	...	...	...	...	...	...	...	...	...	1	...
Lamar	10	10	...	10	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Lauderdale	2	...	2	...	...	(NA)	...	...	...	...	...	...	1	...	...	1	...
Lee	1	...	1	...	...	(NA)	...	...	...	...	...	...	...	...	...	1	...
Leflore	1	1	...	...	...	(NA)	...	...	1	...	...	...	...	...	...	...	...
Lincoln	15	14	1	12	1	(NA)	...	...	1	...	...	...	...	...	...	1	...
Lowndes	5	5	...	1	...	(NA)	...	...	4	...	...	...	...	...	...	...	...
Madison	7	7	...	7	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Marion	10	10	...	9	...	(NA)	...	...	1	...	...	...	...	...	...	...	...
Marshall	1	...	1	...	...	(NA)	...	...	...	...	...	...	...	...	...	1	...
Monroe	8	8	...	3	...	(NA)	...	...	3	...	...	1	...	...	...	...	1
Panola	3	3	...	...	...	(NA)	...	...	1	...	...	...	...	...	2	...	...
Pearl River	2	2	...	...	...	(NA)	...	...	1	...	...	1	...	...	...	...	...
Perry	2	2	...	1	...	(NA)	...	...	1	...	...	...	...	...	...	...	...
Pontotoc	1	1	...	1	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Rankin	5	4	1	3	...	(NA)	...	...	1	...	1	...	...	...	...	...	...
Simpson	1	1	...	1	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Smith	2	2	...	1	...	(NA)	...	...	...	...	...	1	...	...	...	...	...
Sunflower	2	1	1	1	...	(NA)	...	...	...	...	...	...	...	...	...	1	...
Tippah	1	1	...	...	...	(NA)	...	...	...	...	...	1	...	...	...	...	...
Washington	2	2	...	...	...	(NA)	...	...	2	...	...	...	...	...	...	...	...
Wayne	15	15	...	15	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Wilkinson	8	8	...	8	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Yalobusha	1	1	...	...	...	(NA)	...	...	1	...	...	...	...	...	...	...	...
Yazoo	29	29	...	28	...	(NA)	1	...	...	...	...	...	...	...	...	...	...

NA Not available.

[1]See table 3, footnote 3, and for county figures, table 3, footnote 7.

[2]See table 3, footnote 4.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Mississippi, all mineral operations:												
Including operations classified in manufactures	226	24	77	37	36	33	14	4	1	...	...	...
Mineral industries only	214	22	70	36	35	32	14	4	1	...	...	...
Crude petroleum and natural gas extraction, total	165	22	57	26	24	20	11	4	1	...	...	...
Crude petroleum and Natural gas	118	22	50	16	13	9	6	1	1	...	...	...
Natural gas liquids	3	...	...	1	1	1	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	20	...	...	4	7	3	3	3	...	...	...	...
Building, repairing, and dismantling rigs and derricks	3	...	1	1	...	1	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	21	...	6	4	3	6	2	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	61	2	20	11	12	13	3	...	...	...	...	...
Mineral industries only	49	...	13	10	11	12	3	...	...	...	...	...
Crushed and broken limestone:												
Classified in mineral industries	1	...	...	...	...	...	1	...	...	...	...	...
Included in manufactures	1	...	...	...	...	1	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	35	...	11	7	8	7	2	...	...	...	...	...
Glass sand	1	...	...	1	...	...	...	...	...	...	...	...
Foundry sand	1	...	...	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	7	...	...	1	1	5	...	...	...	...	...	...
Fire clay (included in manufactures)	1	1	...	...	...	...	...	...	...	...	...	...
Fuller's earth	1	...	1	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	2	...	1	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	10	1	7	1	1	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	1	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Mississippi, total	3,076	94,282	1,528	0.50	16	2,267	4,054	...	9,296	6	39	32	23
Crude petroleum and natural gas extraction, total	2,382	[4]87,530	666	0.28	8	1,415	xxx	xxx	[5]735	2	23	66	9
Crude petroleum and natural gas	1,057	76,874	343	0.32	4	1,197	xxx	xxx	(NA)	([6])	49	33	[7]18
Natural gas liquids	49	([4])	285	5.82	(NA)	218	xxx	xxx	354	...	...	100	...
Oil and gas field contract services:													
Drilling oil and gas wells	831	6,672	25	0.03	4	...	xxx	xxx	(NA)	1	98	...	[8]1
Building, repairing, and dismantling rigs and derricks	29	180	...	...	...	...	xxx	xxx	...	...	...	...	...
Oil and gas field contract services, n.e.c	416	2,200	13	0.03	6	...	...	...	(NA)	61	...	...	39
Nonmetallic minerals (except fuels) mining, total	694	6,752	862	1.24	128	852	4,054	...	8,561	9	47	11	33
Sand and gravel	482	3,880	852	1.77	220	852	4,054	...	8,551	9	48	10	[8]33
Other industries	212	2,872	10	0.05	3	...	...	...	10	...	...	100	...

xxx Not applicable.
NA Not available.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 120 million gallons of brackish water.
[3]For computations of water intake for production worker, including mine water used, see table 2.
[4]See table 2, footnote 5.
[5]For industries other than Natural gas liquids, includes water intake only.
[6]Less than 0.5 percent.
[7]Includes 17 percent representing "Not specified."
[8]Represents "Not specified."

MISSOURI

124-1

MINING IN MISSOURI: 1954

Rank among States:
Employment, 24
Value of shipments, 28

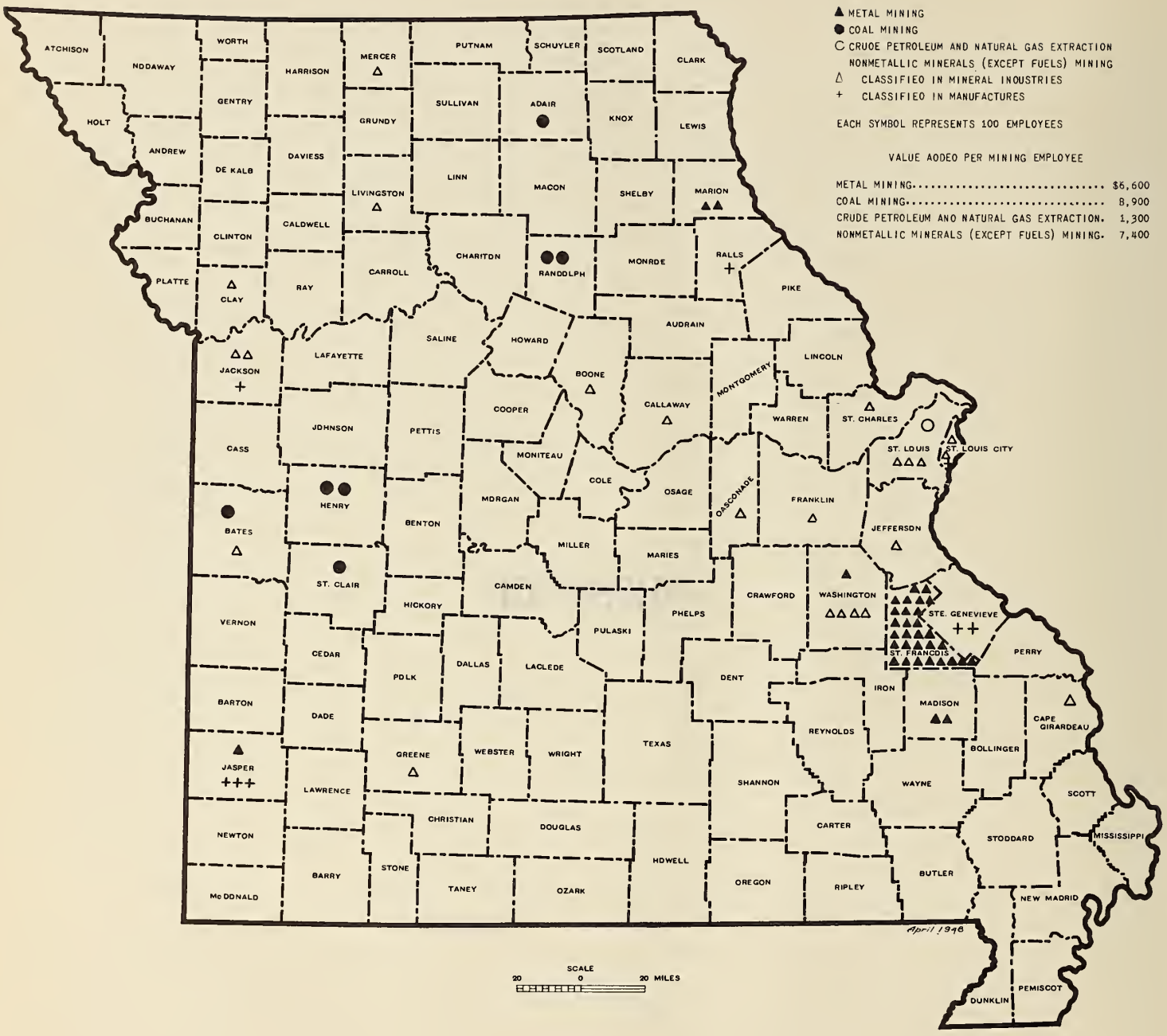


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement and lime establishments					
	1954	1939[1]	1929[2]	1954	1939[1]	1929[3]	1919[4]	1909	1902[5]
Number of operating companies	437	420	(NA)	339	[6]378	(NA)	(NA)	[6]1,050	[6]1,000
Number of establishments	485	(NA)	416	378	(NA)	372	468	1,068	(NA)
Number of mines and quarries	457	460	447	352	397	398	494	1,255	1,054
Number of oil and gas wells producing at end of year	101	132	(NA)	101	132	(NA)	...	39	18
Number of preparation plants	282	158	(NA)	212	121	(NA)	(NA)	(NA)	(NA)
Value of shipments[7]....$1,000	92,869	27,372	47,276	72,593	23,230	41,704	33,366	31,668	20,285
Value added in mining....do	68,571	21,036	37,997	52,076	17,531	33,591	26,130	22,914	17,219
Number of persons engaged, total	9,266	11,158	14,712	7,820	10,142	13,378	16,358	26,385	16,876
Production and development workers	7,548	9,320	13,439	6,275	8,413	12,206	14,857	23,516	[8]15,418
All other employees	1,306	1,541	[9]1,032	1,201	1,445	[9]935	1,004	1,015	1,458
Proprietors and firm members	412	297	241	344	284	237	497	1,854	(NA)
Performing manual labor	244	169	(NA)	206	169	(NA)	219	1,078	(NA)
Man-hours worked by production and development workers....1,000	15,419	16,529	(NA)	12,768	(NA)	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000	58,494	19,002	27,946	49,117	17,045	24,961	25,877	24,472	13,110
Wages of production and development workers....do	27,621	8,968	16,341	22,623	7,827	14,722	16,777	14,436	8,800
Salaries of all other employees....do	6,869	3,698	[9]2,326	6,418	3,519	[9]2,126	1,864	1,282	1,244
Minerals received for preparation....do	2,459	(NA)	(NA)	2,459	(NA)	(NA)	1	1,472	(NA)
Supplies....do	[10]13,059	3,905	5,853	10,121	3,471	5,046	4,784	4,755	2,881
Purchased fuel....do	[10]2,261	549	843	1,781	402	664	1,744	2,230	
Purchased electric energy....do	[10]3,356	1,623	2,416	3,185	1,572	2,237	291		
Contract work....do	[10]2,869	259	167	2,530	254	166	416	297	185
Purchased machinery installed....do	[11]6,160		1,681	5,217		1,404	(NA)		
Capital expenditures, total....do	[11]5,888	(NA)	(NA)	4,798		(NA)	(NA)		
Development and exploration of mineral property....do	[11]1,027		1,423	1,019		1,423	1,141	(NA)	(NA)
Preparation plant construction....do	[11]616	146		517					
Other construction....do	[11]631		(NA)	507		(NA)	(NA)		
New machinery and equipment....do	[11]2,893	371		2,188					
Used plant and equipment....do	[11]721	242		567					
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[11]494	224	166	442	(NA)	145	100	111	52
Per production worker	65	24	12	70		12	7	5	3
Prime movers....1,000	[11]262	69	58	222		46	83	108	52
Electric motors driven by purchased energy....do	[11]232	155	108	220		99	17	3	[12]
Horsepower rating of electric motors driven by energy generated at establishment....do	[11]1,473	4	18	1,353			17	11	2
Energy used....million kwh equivalent	[11]1,260	786	2,149	944			(NA)		
Coal....1,000 short tons	[11]6	54	245	2			489		
Fuel oils....1,000 barrels	[11]257	36	25	210		(NA)	14		
Gas[13]....million cu.ft	[11]723	177	11	219			22	(NA)	(NA)
Electric energy purchased....million kwh	[11]307	162	206	291			(NA)		
Electric energy generated and used....do	[11]1	5	72	1			(NA)		

NA Not available.

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing marble at such operations was $108,000; this value has been included in the value of shipments and value added in mining. The comparable values for limestone and granite are not available.

[2]Excludes data for crude petroleum and natural gas extraction and for common clay and shale operations. There were 17 such clay pits in 1939 with products valued at $123,000. The 1939 value of products of the crude petroleum and natural gas industries was $59,000.

[3]Excludes data for the crude petroleum and natural gas extraction industries. See also footnote 2.

[4]Excludes data for one nonproducing operation.

[5]Includes data for one cement plant and for lime plants producing lime valued at $516,000.

[6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[10]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[11]Excludes statistics for crushed stone and clay operations classified in manufactures.

[12]Less than one-half of the unit of measure specified.

[13]Includes gas produced and used in the same estalbishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Missouri, total		Metal mining				Bituminous coal mining		Crude petroleum and natural gas extraction	
		Including operations classified in manufactures	Mineral industries only	Total	Lead and zinc ores: Valued chiefly for lead	Lead and zinc ores: Valued chiefly for zinc	Iron ores, Manganese ores, Metal mining contract services, and Uranium-radium-vanadium ores	Total	Bituminous coal only	Total	Oil and gas field contract services, n.e.c.
1	Number of operating companies	437	419	22	4	5	13	70	67	19	3
2	Number of establishments	485	456	24	6	5	13	72	69	19	3
	Number of mines, quarries, and producing oil and gas wells:										
3	1954	558	529	18	6	3	9	68	68	101	...
4	1939	592	(NA)	36	9	20	7	180	180	132	(NA)
5	Number of preparation plants	282	280	17	4	5	8	9	9	...	xxx
	Value of shipments: [2]										
6	1954 ...$1,000	92,869	78,171	32,851	30,563	383	[3]1,905	12,166	12,155	306	97
7	1939 ...do	27,372	(NA)	12,733	11,874	804	55	6,139	6,139	96	37
8	Value added in mining ...do	[3]68,571	[3]56,554	[3]24,094	22,513	195	[3]1,386	7,650	7,644	119	78
9	Number of persons engaged, total	9,266	8,377	3,691	3,274	183	234	925	919	100	16
10	Production and development workers	7,548	6,697	2,963	2,700	66	197	787	781	28	13
11	All other employees	1,306	1,268	705	573	112	20	69	69	64	...
12	Proprietors and firm members	412	412	23	1	5	17	69	69	8	3
13	Performing manual labor	244	244	14	1	4	9	53	53	4	1
	Man-hours worked by production and development workers:										
14	1954 ...1,000	15,419	13,461	5,745	5,289	121	335	1,370	1,364	50	28
15	1939 ...do	16,529	(NA)	[6]5,244	4,355	794	[6]95	5,167	5,167	[6]73	25
	At mines:										
16	Underground ...do	4,358	4,358	3,670	3,544	17	109	325	325	xxx	xxx
17	Open-pit ...do	4,701	3,575	100	33	38	29	576	570	xxx	xxx
18	Surface (mine shops, yards, etc.) ...do	1,927	1,739	956	783	38	135	469	469	xxx	xxx
19	At preparation plants ...do	4,383	3,739	1,019	929	28	62			xxx	xxx
20	At oil and gas field operations	50	50	xxx	xxx	xxx	xxx	xxx	xxx	50	28
21	Man-hours spent on development and exploration work (included above) ...do	585	585	100	79	3	18	9	9	14	11
22	Principal expenses designated below, total ...$1,000	58,494	52,376	23,390	21,078	1,193	1,119	7,442	7,427	933	69
23	Wages of production and development workers ...do	27,621	24,371	11,542	10,746	204	592	2,884	2,874	89	50
24	Salaries of all other employees ...do	6,869	6,689	3,910	2,985	816	109	485	485	440	...
25	Minerals received for preparation ...do	2,459	2,075	4,397	...	126	...	3,396	3,391	xxx	xxx
26	Supplies ...do	[8]13,059	10,960		[11]5,189		294			95	18
	Purchased fuel:										
27	Coal ...do	[8]28	28	3	...	...	3	...	...	...	...
28	Fuel oil ...do	[8]1,038	1,037	59	48	5	6	84	84	1	...
29	Gas-natural and manufactured ...do	[8]211	211	77	76	1	...	...	...	...	...
30	Other fuels ...do	[8]984	984	62	30	4	28	44	44	13	1
31	Purchased electric energy ...do	[8]3,356	3,319	2,117	2,004	37	76	536	536	2	...
32	Contract work ...do	[8]2,869	2,702	1,223	(11)	(11)	11	13	13	293	...
33	Purchased machinery installed ...do	[10]6,160	6,064	1,691	1,478	17	196	724	724	234	2
34	Capital expenditures, total ...do	[10]5,888	5,785	894	775	2	117	281	281	451	2
35	Development and exploration of mineral property ...do	[10]1,027	1,027	485	455	2	28	2	2	216	...
36	Preparation plant construction ...do	[10]616	616	35	28	...	7	4	4	xxx	xxx
37	Other construction ...do	[10]631	624	223	214	...	9	32	32	9	1
38	New machinery and equipment ...do	[10]2,893	2,840	85	56	...	29	149	149	226	1
39	Used plant and equipment ...do	[10]721	678	66	22	...	44	94	94	...	...
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total ...1,000	[10]494	488	185	170	3	12	61	61	1	...
41	Per production worker	65	73	62	62	45	61	78	78	36	...
42	Prime movers ...1,000	[10]262	259	18	11	1	6	35	35	1	...
43	Electric motors driven by purchased energy ...do	[10]232	229	167	159	2	6	26	26	(9)	...
44	Horsepower rating of electric motors driven by energy generated at establishment ...do	[10]1,473	1,473	...	...	...	...	(9)	(9)	...	...
45	Energy used ...million kwh equivalent	[10]1,260	1,255	331	305	5	21	76	76	7	(9)
	Produced and used for fuel at same establishment:										
46	Coal ...1,000 short tons	...	...	xxx	xxx	...	xxx	...	...	...	...
47	Crude petroleum ...1,000 barrels	...	...	xxx	xxx	...	xxx	xxx	xxx	...	...
48	Natural gas ...million cu. ft.	[10]13	13	xxx	xxx	...	xxx	xxx	xxx	13	...
	Purchased fuel:										
49	Coal ...1,000 short tons	[10]6	6	1	...	...	1	...	...	...	...
50	Fuel oil ...1,000 barrels	[10]257	256	10	8	1	1	21	21	(9)	...
51	Gas-natural and manufactured ...million cu. ft.	[10]710	709	188	188	(9)	...	...	...	...	...
52	Electric energy purchased ...million kwh	[10]307	303	232	226	2	4	29	29	(9)	...
53	Electric energy generated and used ...do	[10]1	1	...	...	...	...	...	...	...	...
54	Water intake, including mine water used ...million gallons	[10]12,271	12,096	5,087	4,199	713	175	524	524	...	...
55	Per production worker ...do	1.63	1.81	1.72	1.56	10.80	0.89	0.67	0.67	...	...

xxx Not applicable. NA Not available. [1]Represents 1 mine in the native asphalt and bitumens industry, 3 mines in the pyrites industry and 4 mines in the tripoli industry. [2]See table 1, footnote 7. [3]Excludes data for the uranium-radium-vanadium ores industry. [4]Figures for 2 granite quarries are included with those for limestone quarries. [5]Figures for 1 foundry sand mine are included with those for "Nonmetallic minerals (except fuels) contract services and Native asphalt and bitumens." For the latter group, see also footnote 1.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining														
Total		Dimension stone		Crushed and broken stone			Sand and gravel	Clay, ceramic, and refractory minerals				Barite	Nonmetallic minerals (except fuels) contract services and Native asphalt & bitumens	
				Limestone				Fire clay		Clay, ceramic, and refractory minerals, n.e.c.				
Including operations in manufactures	Mineral industries only	Limestone (including operations in manufactures)	Other stone (including operations in manufactures)	Including operations classified in manufactures	Mineral industries only	Granite and Stone, n.e.c.		Including operations classified in manufactures	Mineral industries only	Including operations in manufactures	Mineral industries only			
328	310	9	8	154	145	4	71	47	45	18	4	20	3	1
370	341	10	9	173	163	4	78	51	49	19	4	23	3	2
371	342	10	9	179	169	2	76	51	49	19	4	24	1	3
244	(NA)	3	5	80	(NA)	3	35	70	(NA)	17	(NA)	23	[18]	4
256	254	1	1	158	158	1	69	5	5	1	1	19	1	5
47,546	32,848	159	2,646	26,322	16,322	213	8,513	4,446	3,021	1,763	763	3,416	68	6
8,404	(NA)	[4]107	[4]287	3,826	(NA)	25	[5]1,831	966	(NA)	123	(NA)	837	[5]402	7
36,708	24,691	136	1,782	21,011	12,565	145	6,629	3,147	1,893	1,420	588	2,381	57	8
4,550	3,661	49	378	2,415	1,924	13	842	322	299	113	54	402	16	9
3,770	2,919	38	336	2,001	1,510	8	675	242	219	107	48	354	9	10
468	430	2	40	269	269	3	103	22	22	2	2	25	2	11
312	312	9	2	145	145	2	64	58	58	4	4	23	5	12
173	173	3	1	86	86	...	38	31	31	...	...	9	5	13
8,254	6,296	53	895	4,270	3,288	13	1,455	483	399	214	107	853	18	14
[6]6,045	(NA)	[4]92	[4]249	3,234	(NA)	33	[5]746	[6]817	(NA)	107	(NA)	571	[5]196	15
363	363	4	...	316	316	...	43	...	...	...	...	...	...	16
4,025	2,899	46	229	2,448	1,466	3	[7]538	310	310	49	46	391	11	17
502	314	...	24	262	262	...	(NA)	91	7	104	...	21	...	18
3,364	2,720	3	642	1,244	1,244	10	874	82	82	61	61	441	7	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
462	462	...	...	...	...	...	13	449	449	...	...	...	...	21
26,729	20,611	120	2,256	13,998	10,583	117	5,203	2,105	1,788	759	401	2,133	38	22
13,106	9,856	90	1,196	6,870	5,009	22	2,730	749	603	407	217	1,022	20	23
2,034	1,854	7	189	1,135	1,135	29	436	101	101	15	15	115	7	24
395	11	...	} 646	[8]4,466	2,912	13	{ (NA)	...	...	...	...	...	...	25
[8]7,235	5,136	10					{1,176	[8]525	354	[8]208	40	578	8	26
[8]25	25	...	...	...	...	...	22	...	...	...	...	2	1	27
[8]894	893	3	1	[8]440	440	...	195	[8]188	188	[8]27	27	40	...	28
[8]134	134	...	...	[8]5	5	...	38	[8]2	2	[8]89	89	...	...	29
[8]865	865	7	4	[8]558	558	2	104	[8]87	87	[8]5	5	97	1	30
[8]701	664	2	50	[8]232	232	1	163	[8]40	40	[8]8	8	204	1	31
[8]1,340	1,173	1	170	[8]292	292	50	339	[8]413	413	(9)	(9)	75	...	32
[10]3,511	3,415	28	99	[10]2,009	2,009	4	872	[10]219	219	71	71	205	4	33
[10]4,262	4,159	28	106	[10]2,691	2,691	2	1,025	[10]175	175	65	65	166	4	34
[10]324	324	...	...	[10]281	281	...	8	[13]32	32	...	...	3	...	35
[10]577	577	...	...	[10]478	478	...	99	...	...	...	...	...	...	36
[10]367	360	...	7	[10]229	229	...	124	...	...	...	...	7	...	37
[10]2,433	2,380	18	56	[10]1,410	1,410	2	640	[10]125	125	65	65	117	...	38
[10]561	518	10	43	[10]293	293	...	154	[10]18	18	...	...	39	4	39
[10]247	241	1	7	[10]140	140	(9)	50	[10]21	21	2	2	26	(9)	40
66	83	39	21	70	93	xxx	74	87	97	19	34	74	xxx	41
[10]208	205	1	4	[10]123	123	(9)	39	[10]20	20	1	1	20	(9)	42
[10]39	36	([8])	3	17	17	(9)	11	1	1	1	1	6	...	43
[10]1,473	1,473	...	...	1,167	1,167	...	120	...	...	...	...	186	...	44
[10]846	841	3	10	[10]326	326	(9)	175	[10]146	146	131	131	55	(9)	45
...	...	...	...	...	...	...	...	...	...	...	...	...	...	46
...	...	...	...	xxx	xxx	...	xxx	xxx	...	xxx	xxx	xxx	...	47
...	...	...	...	xxx	xxx	...	xxx	xxx	...	xxx	xxx	xxx	...	48
[10]5	5	...	...	...	...	...	4	...	...	...	...	1	(9)	49
[10]226	225	1	(9)	[10]99	99	...	40	[10]71	71	7	7	6	...	50
[10]522	521	...	...	[10]17	17	...	122	[10]1	1	382	382	...	...	51
[10]46	42	(9)	9	[10]12	12	(9)	13	[10]3	3	(9)	(9)	9	(9)	52
[10]1	1	...	...	[10]1	1	...	...	...	...	...	...	...	...	53
[10]6,660	6,485	1	179	[10]24	24	14	1,639	[10]16	16	10	10	4,777	...	54
1.77	2.22	0.03	0.53	0.01	0.02	1.75	2.43	0.07	0.07	0.09	0.21	13.49	...	55

[6]Figures for the following nonproducing mines in other industries are included with those for the Crude petroleum and natural gas industry: 1 iron ore mine, 1 zinc ore mine, and 2 fire clay mines. [7]Includes man-hours worked on floating equipment. [8]See table 1, footnote 10.
[9]Less than one-half of the unit of measure specified. [10]See table 1, footnote 11. [11]Cost of contract work is included in cost of supplies.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Missouri, all mineral operations:									
Including operations in manufactures	485	92,869	68,571	7,548	1,306	15,419	27,621	6,869	[2]5,167
Mineral industries only:									
Including crude petroleum and natural gas	456	78,171	56,554	6,697	1,268	13,461	24,371	6,689	5,107
Excluding crude petroleum and natural gas	437	77,865	56,435	6,669	1,204	13,411	24,282	6,249	4,656
Metal mining, total	24	32,851	24,094	2,963	705	5,745	11,542	3,910	828
Lead and zinc ores	11	30,946	22,708	2,766	685	5,410	10,950	3,801	755
Other metal mining	13	[3]1,905	[3]1,386	197	20	335	592	109	73
Bituminous coal mining	72	12,166	7,650	787	69	1,370	2,884	485	187
Crude petroleum and natural gas extraction[4]	19	306	119	28	64	50	89	440	451
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	370	47,546	36,708	3,770	468	8,254	13,106	2,034	[2]3,701
Mineral industries only	341	32,848	24,691	2,919	430	6,296	9,856	1,854	3,641
Dimension stone (including operations in manufactures)	19	2,805	1,918	374	42	948	1,286	196	81
Crushed and broken stone:									
Including operations in manufactures	177	26,535	21,156	2,009	272	4,283	6,892	1,164	[2]2,400
Mineral industries only	167	16,535	12,710	1,518	272	3,301	5,031	1,164	2,400
Sand and gravel	78	8,513	6,629	675	103	1,455	2,730	436	871
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	70	6,209	4,567	349	24	697	1,156	116	[2]222
Mineral industries only	53	3,784	2,481	267	24	506	820	116	222
Chemical and fertilizer mineral mining (Barite)	23	3,416	2,381	354	25	853	1,022	115	127
Nonmetallic minerals (except fuels) contract services and Miscellaneous nonmetallic minerals, n.e.c	3	68	57	9	2	18	20	7	...
COUNTY									
Adair (Bituminous coal only)	4	290	242	75	...	124	207	...	4
Audrain (including operations in manufactures)	4	1,668	1,409	[5]32	([5])	65	[5]115	([5])	5
Barton (Bituminous coal only)	4	664	532	31	2	61	122	20	1
Bates	7	3,048	1,090	119	9	246	438	53	67
Bituminous coal	3	2,643	932	69	6	126	311	46	18
Boone (mineral industries only)	10	629	497	64	6	154	209	25	27
Nonmetallic minerals (except fuels) mining (mineral industries only)	6	543	422	56	5	140	194	23	27
Buchanan (mineral industries only)	4	268	235	27	6	60	86	31	4
Callaway	12	1,397	1,040	113	22	227	390	100	33
Cape Girardeau (mineral industries only)	5	406	325	57	6	109	150	33	25
Cass (mineral industries only)	5	332	268	[5]26	([5])	50	[5]90	([5])	27
Clay	7	1,129	1,028	101	15	240	388	54	118
Cole (mineral industries only)	4	104	82	17	1	30	41	2	9
Cooper	4	201	158	28	3	53	86	8	7
Franklin	13	929	691	102	3	194	319	9	48
Sand and gravel	6	788	601	77	2	154	273	8	44
Gasconade	18	1,029	546	99	5	176	274	33	45
Greene (including operations in manufactures)	4	1,026	781	76	11	164	265	35	[2]30
Harrison	4	191	146	32	2	63	79	5	22
Henry	13	3,372	2,405	203	24	360	906	210	98
Bituminous coal	9	3,150	2,258	179	24	304	846	210	67
Jackson (mineral industries only)	18	2,184	1,647	169	41	341	699	238	96
Crushed and broken stone	10	1,898	1,440	143	25	294	608	167	87

See footnotes at end of table.

Table 3.--GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954--Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY--Continued									
Jasper (mineral industries only)	11	2,865	1,889	346	50	935	1,290	237	61
Jefferson, total	9	927	695	71	18	146	348	48	248
Crushed and broken stone	4	123	79	15	...	40	46	...	26
Sand and gravel	5	804	616	56	18	106	302	48	222
Johnson	5	125	117	14	4	24	40	11	29
Lafayette (mineral industries only), total	11	434	370	79	8	136	214	20	...
Bituminous coal	7	105	92	43	2	56	69	5	...
Nonmetallic minerals (except fuels) mining	4	329	278	36	6	80	145	15	...
Lewis	3	436	284	31	7	100	136	27	1
Lincoln	5	310	219	30	2	53	74	13	...
Livingston (mineral industries only)	4	345	206	52	6	96	133	17	50
Madison	4	3,912	2,739	355	56	705	1,370	455	185
Monroe	8	221	157	21	2	34	53	2	...
Montgomery	12	666	451	41	3	87	114	11	129
Clay, ceramic, and refractory minerals	6	546	372	27	2	59	79	9	70
Osage	5	104	77	13	...	19	26	...	9
Phelps	6	380	306	42	...	73	134	...	169
Pike	3	182	132	20	1	43	51	3	4
Platte	4	822	636	47	3	109	224	19	67
Randolph	11	3,052	2,859	168	8	316	578	48	9
Bituminous coal	8	2,719	1,568	157	8	298	556	48	9
Ray	7	352	248	31	19	56	83	76	8
Nonmetallic minerals (except fuels) mining	4	337	235	25	19	51	77	76	8
St. Charles	6	952	709	59	26	125	203	113	40
St. Clair	6	933	693	69	7	133	306	46	14
St. Francois (including operations in manufactures)	6	27,868	20,553	2,481	492	4,802	9,744	2,586	305
St. Louis, total:									
Including operations in manufactures	34	(NA)	(NA)	[5]366	([5])	(NA)	(NA)	(NA)	(NA)
Mineral industries only	30	(NA)	(NA)	[5]330	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas extraction[6]	[6]10	(NA)	(NA)	[5]73	([5])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	9	2,140	1,811	11[illegible]	19	221	571	133	179
Crushed and broken stone and clay, ceramic, and refractory minerals (including operations in manufactures)	15	2,748	2,185	165	35	355	713	230	[2]306
St. Louis City (including operations in manufactures)	10	(NA)	(NA)	[5]371	([5])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	6	1,608	1,274	143	11	340	716	69	137
Ste. Genevieve (mineral industries only)	6	242	209	37	4	71	91	8	13
Stoddard	3	185	135	24	4	52	55	9	12
Vernon	6	(NA)	(NA)	[5]18	([5])	(NA)	(NA)	(NA)	(NA)
Washington	25	4,395	3,215	436	39	1,023	1,374	188	401
Wayne	3	113	94	22	4	36	42	9	...

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. [1]See table 1, footnote 7. [2]See table 1, footnote 11. [3]See table 2, footnote 3. [4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries. [5]Figures for "All other employees" are included with those for "Production and development workers." [6]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	All mineral operations			Metal mining						Bituminous coal mining	
					Lead and zinc ores						
	Total	Classified in mineral industries	Included in manufactures	Iron ores	Valued chiefly for lead	Valued chiefly for zinc	Manganese ores	Metal mining contract services	Uranium-radium-vanadium ores	Bituminous coal	Bituminous coal mining contract services
Missouri, total	485	456	29	7	6	5	1	4	1	69	3
Adair	5	5	...	...	...	...	...	...	...	4	...
Andrews	2	2	...	...	...	...	...	...	...	...	...
Andrin	4	2	2	...	...	...	...	...	...	...	...
Barton	5	5	...	...	...	...	...	...	...	4	...
Bates	7	7	...	...	...	...	...	...	...	3	...
Benton	2	2	...	...	...	...	...	...	...	...	...
Boone	11	10	1	...	...	...	...	...	...	4	...
Buchanan	5	4	1	...	...	...	...	...	...	...	...
Butler	1	1	...	...	...	...	...	...	...	...	...
Caldwell	2	2	...	...	...	...	...	...	...	...	...
Callaway	11	11	...	...	...	...	...	...	...	2	...
Cape Girardeau	8	5	3	...	...	...	...	...	...	...	...
Carroll	1	1	...	...	...	...	...	...	...	...	...
Cass	7	5	2	...	...	...	...	...	...	...	...
Cedar	1	1	...	...	...	...	...	...	...	...	...
Chariton	1	1	...	...	...	...	...	...	...	1	...
Christian	2	2	...	...	...	...	...	...	...	...	...
Clark	2	2	...	...	...	...	...	...	...	...	...
Clay	7	7	...	...	...	...	...	...	...	2	...
Clinton	2	2	...	...	...	...	...	...	...	...	...
Cole	5	4	1	...	...	...	...	...	...	...	...
Cooper	4	4	...	...	...	...	...	...	...	...	...
Crawford	2	2	...	...	...	...	...	...	...	...	...
Dade	2	2	...	...	...	...	...	...	...	1	...
Daviess	2	2	...	...	...	...	...	...	...	1	...
De Kalb	1	1	...	...	...	...	...	...	...	...	...
Douglas	1	1	...	...	...	...	...	...	...	...	...
Dunklin	2	2	...	...	...	...	...	...	...	...	...
Franklin	13	13	...	...	...	...	...	...	...	...	...
Gasconade	18	18	...	...	...	...	...	...	...	...	...
Gentry	3	3	...	...	...	...	...	...	...	...	...
Greene	4	3	1	...	...	...	...	...	...	...	...
Grundy	3	3	...	...	...	...	...	...	...	...	...
Harrison	4	4	...	...	...	...	...	...	...	1	...
Henry	13	13	...	...	...	...	...	...	...	9	1
Hickory	1	1	...	...	...	...	...	...	...	...	...
Holt	1	1	...	...	...	...	...	...	...	...	...
Howard	3	3	...	...	...	...	...	...	...	...	...
Howell	3	3	...	2	...	...	...	...	...	...	...
Iron	2	2	...	...	...	...	...	...	...	...	...
Jackson	21	18	3	...	...	...	...	...	...	...	...
Jasper	12	11	1	...	1	4	...	...	1	...	...
Jefferson	9	9	...	...	...	...	...	...	...	...	...
Johnson	5	5	...	...	...	...	...	...	...	1	...
Knox	2	2	...	...	...	...	...	...	...	...	...
Laclede	2	2	...	...	...	...	...	...	...	...	...
Lafayette	12	11	1	...	...	...	...	...	...	7	...
Lawrence	3	3	...	...	...	...	...	...	...	...	...
Lewis	3	3	...	...	...	...	...	...	...	...	...
Lincoln	5	5	...	...	...	...	...	...	...	...	...

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mines or quarry)

State and county	Crude petroleum and natural gas extraction[1]		Nonmetallic minerals (except fuels) mining								
			Dimension stone							Crushed and broken stone (limestone)	
			Limestone			Marble					
	Crude petroleum and natural gas	Oil and gas field contract services	Classified in mineral industries	Included in manufactures	Granite	Classified in mineral industries	Included in manufactures	Sandstone	Stone, n.e.c.	Classified in mineral industries	Included in manufactures[2]
Missouri, total	16	3	9	1	1	3	1	1	3	163	10
Adair	...		...	...	...	...	...	...	...	1	...
Andrews	...		...	...	...	...	...	...	...	2	...
Andrin	...		...	...	...	...	...	...	...	1	...
Barton	...		...	...	...	...	...	...	...	...	...
Bates	...		...	...	...	...	...	...	...	3	...
Benton	...		...	...	...	...	...	...	...	1	...
Boone	...		...	...	...	...	...	...	...	5	...
Buchanan	...		...	...	...	...	...	...	...	3	...
Butler	...		...	...	...	...	...	...	...	...	...
Caldwell	...		...	...	...	...	...	...	...	2	...
Callaway	...		...	...	...	...	...	...	...	2	...
Cape Girardeau	...		...	...	...	...	...	...	...	3	1
Carroll	...		...	...	...	...	...	...	...	1	...
Cass	1		...	...	...	...	...	...	...	4	1
Cedar	...		...	...	...	...	...	...	...	1	...
Chariton	...		...	...	...	...	...	...	...	...	...
Christian	...		...	...	...	...	...	...	...	1	...
Clark	...		...	...	...	...	...	...	...	2	...
Clay	...		...	...	...	...	...	...	...	5	...
Clinton	...		...	...	...	...	...	...	...	2	...
Cole	...		...	...	...	...	...	...	...	1	...
Cooper	...		...	...	...	...	...	...	...	1	...
Crawford	...		...	...	...	...	...	...	...	1	...
Dade	...		...	...	...	...	...	...	...	1	...
Daviess	...	(NA)	...	...	...	...	...	...	...	1	...
De Kalb	...		...	...	...	...	...	...	...	1	...
Douglas	...		...	...	...	...	...	...	...	...	...
Dunklin	...		...	...	...	...	...	...	...	...	...
Franklin	...		2	...	...	...	...	...	...	4	...
Gasconade	...		...	...	...	...	...	...	...	1	...
Gentry	...		...	...	...	...	...	...	...	3	...
Greene	...		1	...	...	...	...	...	...	2	1
Grundy	...		...	...	...	...	...	...	...	3	...
Harrison	...		...	...	...	...	...	...	...	3	...
Henry	...		...	...	...	...	...	...	...	2	...
Hickory	...		...	...	...	...	...	...	...	1	...
Holt	...		...	...	...	...	...	...	...	1	...
Howard	...		...	...	...	...	...	...	...	1	...
Howell	...		...	...	...	...	...	...	...	1	...
Iron	...		...	...	1	...	...	...	...	1	...
Jackson	...		3	...	...	...	...	...	3	10	1
Jasper	...		...	...	...	...	1	...	...	1	...
Jefferson	...		...	...	...	...	...	...	...	4	...
Johnson	...		...	...	...	...	...	...	...	4	...
Knox	...		...	...	...	...	...	...	...	2	...
Laclede	...		1	...	...	...	...	...	...	1	...
Lafayette	...		...	...	...	...	...	...	...	2	...
Lawrence	...		1	...	...	...	...	...	...	2	...
Lewis	...		...	...	...	...	...	...	...	2	...
Lincoln	...		...	...	...	...	...	...	...	3	...

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nonmetallic minerals (except fuels) mining—Continued											
	Crushed and broken stone—Continued		Sand and gravel			Clay, ceramic, and refractory minerals				Barite	Non-metallic minerals (except fuels) contract services	Native asphalt and bitumens
						Fire clay		Clay, ceramic, and refractory minerals, n.e.c.				
	Granite	Stone, n.e.c.	Common sand and gravel	Glass sand	Foundry sand	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures			
Missouri, total	1	3	75	2	1	49	2	4	15	23	2	1
Adair	...	...	...	...	...	...	...	...	...	...	...	...
Andrews	...	...	...	...	...	...	...	...	...	...	...	...
Andrin	...	...	...	...	...	1	2	...	...	...	...	...
Barton	...	...	...	...	...	...	...	...	...	...	...	1
Bates	...	...	1	...	...	...	...	...	...	...	...	...
Benton	...	...	1	...	...	...	...	...	...	...	...	...
Boone	...	...	1	...	...	...	...	...	1	...	...	...
Buchanan	...	...	1	...	...	...	...	...	1	...	...	...
Butler	...	...	1	...	...	...	...	...	...	...	...	...
Caldwell	...	...	...	...	...	...	...	...	...	...	...	...
Callaway	...	...	...	...	...	7	...	...	...	...	...	...
Cape Girardeau	...	...	2	...	...	...	...	...	2	...	...	...
Carroll	...	...	...	...	...	...	...	...	...	...	...	...
Cass	...	...	...	...	...	...	...	...	1	...	...	...
Cedar	...	...	...	...	...	...	...	...	...	...	...	...
Chariton	...	...	...	...	...	...	...	...	...	...	...	...
Christian	...	...	1	...	...	...	...	...	...	...	...	...
Clark	...	...	...	...	...	...	...	...	...	...	...	...
Clay	...	...	...	...	...	...	...	...	...	...	...	...
Clinton	...	...	...	...	...	...	...	...	...	...	...	...
Cole	...	...	3	...	...	...	...	...	1	...	...	...
Cooper	...	...	3	...	...	...	...	...	...	...	...	...
Crawford	...	...	...	...	...	1	...	...	...	...	...	...
Dade	...	...	...	...	...	...	...	...	...	...	...	...
Daviess	...	...	...	...	...	...	...	...	...	...	...	...
De Kalb	...	...	...	...	...	...	...	...	...	...	...	...
Douglas	...	...	1	...	...	...	...	...	...	...	...	...
Dunklin	...	...	2	...	...	...	...	...	...	...	...	...
Franklin	...	...	6	...	...	...	...	1	...	...	...	...
Gasconade	...	...	...	...	...	17	...	...	...	...	...	...
Gentry	...	...	...	...	...	...	...	...	...	...	...	...
Greene	...	...	...	...	...	...	...	...	...	...	...	...
Grundy	...	...	...	...	...	...	...	...	...	...	...	...
Harrison	...	...	...	...	...	...	...	...	...	...	...	...
Henry	...	...	1	...	...	...	...	...	...	...	...	...
Hickory	...	...	...	...	...	...	...	...	...	...	...	...
Holt	...	...	...	...	...	...	...	...	...	...	...	...
Howard	...	1	1	...	...	...	...	...	...	...	...	...
Howell	...	...	...	...	...	...	...	...	...	...	...	...
Iron	...	...	...	...	...	...	...	...	...	...	...	...
Jackson	...	...	2	...	...	...	...	...	2	...	...	...
Jasper	...	1	3	...	...	...	...	...	...	...	...	...
Jefferson	...	...	3	1	1	...	...	...	...	...	...	...
Johnson	...	...	...	...	...	...	...	...	...	...	...	...
Knox	...	...	...	...	...	...	...	...	...	...	...	...
Laclede	...	...	...	...	...	...	...	...	...	...	...	...
Lafayette	...	...	2	...	...	...	...	...	1	...	...	...
Lawrence	...	...	...	...	...	...	...	...	...	...	...	...
Lewis	...	...	1	...	...	...	...	...	...	...	...	...
Lincoln	...	...	...	...	...	2	...	...	...	...	...	...

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	All mineral industries			Metal mining						Bituminous coal mining	
					Lead and zinc ores						
	Total	Classified in mineral industries	Included in manufactures	Iron ores	Valued chiefly for lead	Valued chiefly for zinc	Manganese ores	Metal mining contract services	Uranium-radium-vanadium ores	Bituminous coal	Bituminous coal mining contract services
Linn	1	1	...	...	...	...	...	...	...	...	...
Livingston	5	4	1	...	...	...	...	...	...	...	...
Macon	3	3	...	...	...	...	...	...	...	2	...
Madison	4	4	...	...	2	...	...	2	...	...	...
Maries	2	2	...	...	...	...	...	...	...	...	...
Marion	2	2	...	...	...	...	...	...	...	...	...
Mercer	2	2	...	...	...	...	...	...	...	...	...
Miller	1	...	1	...	...	...	...	...	...	...	...
Moniteau	2	2	...	...	...	...	...	...	...	...	...
Monroe	8	8	...	...	...	...	...	...	...	1	...
Montgomery	12	12	...	...	...	...	...	...	...	1	...
Morgan	3	3	...	...	...	...	...	...	...	...	...
Newton	2	1	1	...	...	1	...	...	...	...	...
Nodaway	1	1	...	...	...	...	...	...	...	...	...
Oregon	2	2	...	1	...	...	...	...	...	...	...
Osage	5	5	...	...	...	...	...	...	...	...	...
Ozark	2	2	...	2	...	...	...	...	...	...	...
Pemiscot	2	2	...	...	...	...	...	...	...	...	...
Perry	1	1	...	...	...	...	...	...	...	...	...
Pettis	2	2	...	...	...	...	...	...	...	...	...
Phelps	6	6	...	...	...	...	...	...	...	...	...
Pike	3	3	...	...	...	...	...	...	...	...	...
Platte	4	4	...	...	...	...	...	...	...	...	...
Pulaski	2	2	...	...	...	...	...	...	...	1	...
Putnam	4	4	...	...	...	...	...	...	...	4	...
Ralls	5	3	2	...	...	...	...	...	...	1	...
Randolph	11	11	...	...	...	...	...	...	...	8	...
Ray	7	7	...	...	...	...	...	...	...	3	...
Ripley	1	1	...	...	...	...	...	...	...	...	...
St. Charles	6	6	...	...	...	...	...	...	...	...	...
St. Clair	6	6	...	...	...	...	...	...	...	3	1
St. Francois	6	5	1	1	2	...	...	1	...	...	...
St. Louis	34	30	4	...	...	...	...	...	...	...	...
St. Louis City	10	8	2	...	...	...	...	...	...	...	...
Ste. Genevieve	7	6	1	...	...	...	...	...	...	...	...
Saline	4	4	...	...	...	...	...	...	...	...	...
Scott	1	1	...	...	...	...	...	...	...	...	...
Shannon	3	3	...	1	...	...	1	...	...	...	...
Shelby	2	2	...	...	...	...	...	...	...	...	...
Stoddard	3	3	...	...	...	...	...	...	...	...	...
Sullivan	2	2	...	...	...	...	...	...	...	...	...
Texas	1	1	...	...	...	...	...	...	...	...	...
Vernon	7	7	...	...	...	...	...	...	...	5	1
Warren	5	5	...	...	...	...	...	...	...	...	...
Washington	25	25	...	...	1	...	...	1	...	...	...
Wayne	3	3	...	...	...	...	...	...	...	...	...
Webster	1	1	...	...	...	...	...	...	...	...	...
Wright	1	1	...	...	...	...	...	...	...	...	...

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Crude petroleum and natural gas extraction[1]		Nonmetallic minerals (except fuels) mining								
			Dimension stone							Crushed and broken stone (limestone)	
			Limestone			Marble					
	Crude petroleum and natural gas	Oil and gas field contract services	Classified in mineral industries	Included in manufactures	Granite	Classified in mineral industries	Included in manufactures	Sandstone	Stone, n.e.c.	Classified in mineral industries	Included in manufactures[2]
Linn	...		...	...	...	...	...	...	...	1	...
Livingston	...		...	...	...	...	...	...	...	3	...
Macon	...		...	...	...	...	...	...	...	1	...
Madison	...		...	...	...	...	...	...	...	...	...
Maries	...		...	...	...	...	...	...	...	...	...
Marion	...		...	...	...	...	...	...	...	1	...
Mercer	...		...	...	...	...	...	...	...	2	...
Miller	...		...	1	...	...	...	...	...	...	...
Moniteau	...		...	...	...	...	...	...	...	2	...
Monroe	...		...	...	...	...	...	...	...	2	...
Montgomery	...		...	...	...	...	...	...	...	2	...
Morgan	...		...	...	...	...	...	...	...	1	...
Newton	...		...	...	...	...	...	...	...	...	1
Nodaway	...		...	...	...	...	...	...	...	...	...
Oregon	...		...	...	...	...	...	...	...	1	...
Osage	...		...	...	...	...	...	...	...	2	...
Ozark	...		...	...	...	...	...	...	...	...	...
Pemiscot	...		...	...	...	...	...	...	...	...	...
Perry	...		...	...	...	...	...	...	...	1	...
Pettis	...		...	...	...	...	...	...	...	1	...
Phelps	...		...	...	...	...	...	...	...	3	...
Pike	...		...	...	...	...	...	...	...	3	...
Platte	...		...	...	...	...	...	...	...	3	...
Pulaski	...		...	...	...	...	...	...	...	...	...
Putnam	...	(NA)	...	...	...	...	...	...	...	...	...
Ralls	...		...	...	...	...	...	...	...	1	1
Randolph	...		...	...	...	...	...	...	...	3	...
Ray	...		...	...	...	...	...	...	...	3	...
Ripley	...		...	...	...	...	...	...	...	...	...
St. Charles	...		...	...	...	...	...	...	...	5	...
St. Clair	...		...	...	...	...	...	...	...	1	...
St. Francois	...		...	...	...	...	...	...	...	...	1
St. Louis	10		...	...	...	...	...	...	...	8	1
St. Louis City	1		...	...	...	...	...	...	...	1	1
Ste. Genevieve	...		1	...	...	3	...	...	...	1	1
Saline	...		...	...	...	...	...	...	...	3	...
Scott	...		...	...	...	...	...	...	...	...	...
Shannon	...		...	...	...	...	...	...	...	...	...
Shelby	...		...	...	...	...	...	...	...	2	...
Stoddard	...		...	...	...	...	...	...	...	...	...
Sullivan	...		...	...	...	...	...	...	...	2	...
Texas	...		...	...	...	...	...	...	...	1	...
Vernon	1		...	...	...	...	...	...	...	...	...
Warren	...		...	...	...	...	...	...	...	1	...
Washington	...		...	...	...	...	...	...	...	...	...
Wayne	...		...	...	...	...	...	1	...	1	...
Webster	...		...	...	...	...	...	...	...	1	...
Wright	...		...	...	...	...	...	....	...	1	...

NA Not available.

[1]See table 3, footnote 4, and for county figures, footnote 6.

[2]Includes one quarry classified in wholesale trade.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nonmetallic minerals (except fuels) mining—Continued											
	Crushed and broken stone—Continued		Sand and gravel			Clay, ceramic, and refractory minerals				Barite	Non-metallic minerals (except fuels) contract services	Native asphalt and bitumens
						Fire clay		Clay, ceramic, and refractory minerals, n.e.c.				
	Granite	Stone, n.e.c.	Common sand and gravel	Glass sand	Foundry sand	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures			
Linn	...	...	...	...	...	...	...	...	...	...	...	...
Livingston	...	...	1	...	...	...	...	...	1	...	...	...
Macon	...	...	...	...	...	...	...	...	...	...	...	...
Madison	...	...	...	...	...	...	...	...	...	...	...	...
Maries	...	...	...	...	...	1	...	1	...	...	...	...
Marion	...	...	1	...	...	...	...	...	...	...	...	...
Mercer	...	...	...	...	...	...	...	...	...	...	...	...
Miller	...	...	...	...	...	...	...	...	...	...	...	...
Moniteau	...	...	...	...	...	...	...	...	...	...	...	...
Monroe	...	...	1	...	...	4	...	...	...	...	...	...
Montgomery	...	...	2	...	...	6	...	...	...	...	1	...
Morgan	...	...	1	...	...	...	...	...	...	1	...	...
Newton	...	...	...	...	...	...	...	...	...	...	...	...
Nodaway	...	...	1	...	...	...	...	...	...	...	...	...
Oregon	...	...	...	...	...	...	...	...	...	...	...	...
Osage	...	...	...	...	...	3	...	...	...	...	...	...
Ozark	...	...	...	...	...	...	...	...	...	...	...	...
Pemiscot	...	...	2	...	...	...	...	...	...	...	...	...
Perry	...	...	...	...	...	...	...	...	...	...	...	...
Pettis	...	...	1	...	...	...	...	...	...	...	...	...
Phelps	...	...	...	...	...	3	...	...	...	...	...	...
Pike	...	...	...	...	...	...	...	...	...	...	...	...
Platte	...	...	...	...	...	...	...	1	...	...	...	...
Pulaski	...	...	1	...	...	...	...	...	...	...	...	...
Putnam	...	...	...	...	...	...	...	...	...	...	...	...
Ralls	...	...	1	...	...	...	...	...	1	...	...	...
Randolph	...	...	...	...	...	...	...	...	...	...	...	...
Ray	...	...	1	...	...	...	...	...	...	...	...	...
Ripley	...	...	1	...	...	...	...	...	...	...	...	...
St. Charles	...	...	...	1	...	...	...	...	...	...	...	...
St. Clair	...	...	1	...	...	...	...	...	...	...	...	...
St. Francois	1	...	...	...	...	...	...	...	...	...	...	...
St. Louis	...	1	9	...	...	1	...	1	3	...	...	...
St. Louis City	...	...	6	...	...	...	...	...	1	...	...	...
Ste. Genevieve	...	...	1	...	...	...	...	...	...	...	...	...
Saline	...	...	1	...	...	...	...	...	...	...	...	...
Scott	...	...	1	...	...	...	...	...	...	...	...	...
Shannon	...	...	...	...	...	...	...	...	...	...	1	...
Shelby	...	...	...	...	...	...	...	...	...	...	...	...
Stoddard	...	...	3	...	...	...	...	...	...	...	...	...
Sullivan	...	...	...	...	...	...	...	...	...	...	...	...
Texas	...	...	...	...	...	...	...	...	...	...	...	...
Vernon	...	...	...	...	...	...	...	...	...	...	...	...
Warren	...	...	1	...	...	3	...	...	...	...	...	...
Washington	...	...	1	...	...	...	...	...	...	22	...	...
Wayne	...	...	1	...	...	...	...	...	...	...	...	...
Webster	...	...	...	...	...	...	...	...	...	...	...	...
Wright	...	...	...	...	...	...	...	...	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Missouri, all mineral operations:												
Including operations classified in manufactures	485	38	195	96	73	66	11	4	1	...	...	1
Mineral industries only	456	37	186	89	70	61	9	3	...	...	...	1
Metal mining, total	24	1	10	5	1	2	1	3	...	...	...	1
Iron ores	7	...	4	2	...	...	...	1	...	...	...	...
Lead and zinc ores:												
Valued chiefly for lead	6	1	1	...	...	...	1	2	...	...	...	1
Valued chiefly for zinc	5	...	2	1	...	2	...	...	...	...	...	...
Manganese ores	1	...	...	1	...	...	...	...	...	...	...	...
Metal mining contract services	4	...	3	...	1	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	1	...	...	1	...	...	...	...	...	...	...	...
Bituminous coal mining, total	72	9	35	10	4	9	5	...	...	...	...	...
Bituminous coal	69	9	32	10	4	9	5	...	...	...	...	...
Bituminous coal mining contract services	3	...	3	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	19	3	13	2	...	1	...	...	...	...	...	...
Crude petroleum and natural gas	16	3	12	...	...	1	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	1	...	...	1	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	2	...	1	1	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	370	25	137	79	68	54	5	1	1	...	...	...
Mineral industries only	341	24	128	72	65	49	3	...	...	...	...	...
Dimension stone:												
Limestone:												
Classified in mineral industries	9	1	7	...	1	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Granite	1	...	...	...	...	1	...	...	...	...	...	...
Marble:												
Classified in mineral industries	3	...	1	1	1	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	1	...	...	...
Sandstone	1	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c	3	1	1	1	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	163	6	52	39	38	27	1	...	...	...	...	...
Included in manufactures and wholesale trade	10	...	1	...	1	5	2	1	...	...	...	...
Granite	1	...	...	1	...	...	...	...	...	...	...	...
Stone, n.e.c	3	1	2	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	75	6	32	14	9	13	1	...	...	...	...	...
Glass sand	2	...	...	...	1	1	...	...	...	...	...	...
Foundry sand	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	49	8	26	9	4	2	...	...	...	...	...	...
Included in manufactures	2	...	...	1	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	4	...	2	1	...	1	...	...	...	...	...	...
Included in manufactures	15	1	8	5	1	...	...	...	...	...	...	...
Barite	23	...	2	5	11	4	1	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	2	1	1	...	...	...	...	...	...	...	...	...
Native asphalt and bitumens	1	...	...	1	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Missouri, total	6,697	56,554	7,087	1.06	125	6,644	5,009	4,839	25,261	(2)	58	14	28
Metal mining, total	2,963	24,094	795	0.27	33	668	4,292	4,255	12,947	(2)	60	40	...
Lead and zinc ores:													
Valued chiefly for lead	2,700	22,513	203	0.08	9	203	3,996	3,996	11,215	1	99	...	...
Valued chiefly for zinc	66	195	417	6.32	2,138	303	296	226	1,009	...	24	76	...
Other metal mining	197	[3]1,386	175	0.89	126	162	...	33	723	...	...	...	...
Bituminous coal mining, total	787	7,650	282	0.36	37	231	242	374	1,039	...	39	22	39
Bituminous coal	781	7,644	282	0.36	37	231	242	374	1,039	...	39	22	[4]39
Bituminous coal mining contract services	6	6	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	28	119	...	...	...	4	xxx	xxx	...	...	...	...	...
Crude petroleum and natural gas	15	41	...	...	...	4	xxx	xxx	...	...	...	...	...
Oil and gas field contract services	13	78	...	...	...	...	xxx	xxx	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	2,919	24,691	6,010	2.06	243	5,741	475	210	11,275	(2)	59	10	31
Crushed and broken stone:													
Limestone	1,510	12,565	24	0.02	2	18	...	...	24	21	4	75	...
Other	8	145	...	...	...	...	14	5	23	...	...	...	...
Sand and gravel	675	6,629	1,179	1.75	178	1,169	460	...	1,995	...	36	13	[4]51
Clay, ceramic, and refractory minerals:													
Fire clay	219	1,893	16	0.07	8	16	...	13	16	...	...	100	...
Clay, ceramic, and refractory minerals, n.e.c.	48	588	10	0.21	17	10	...	...	10	...	...	100	...
Barite	354	2,381	[5]4,777	13.49	2,006	4,528	([5])	192	9,202	...	65	8	[4]27
Other industries	105	490	4	0.04	8	...	1	...	5	...	100	...	...

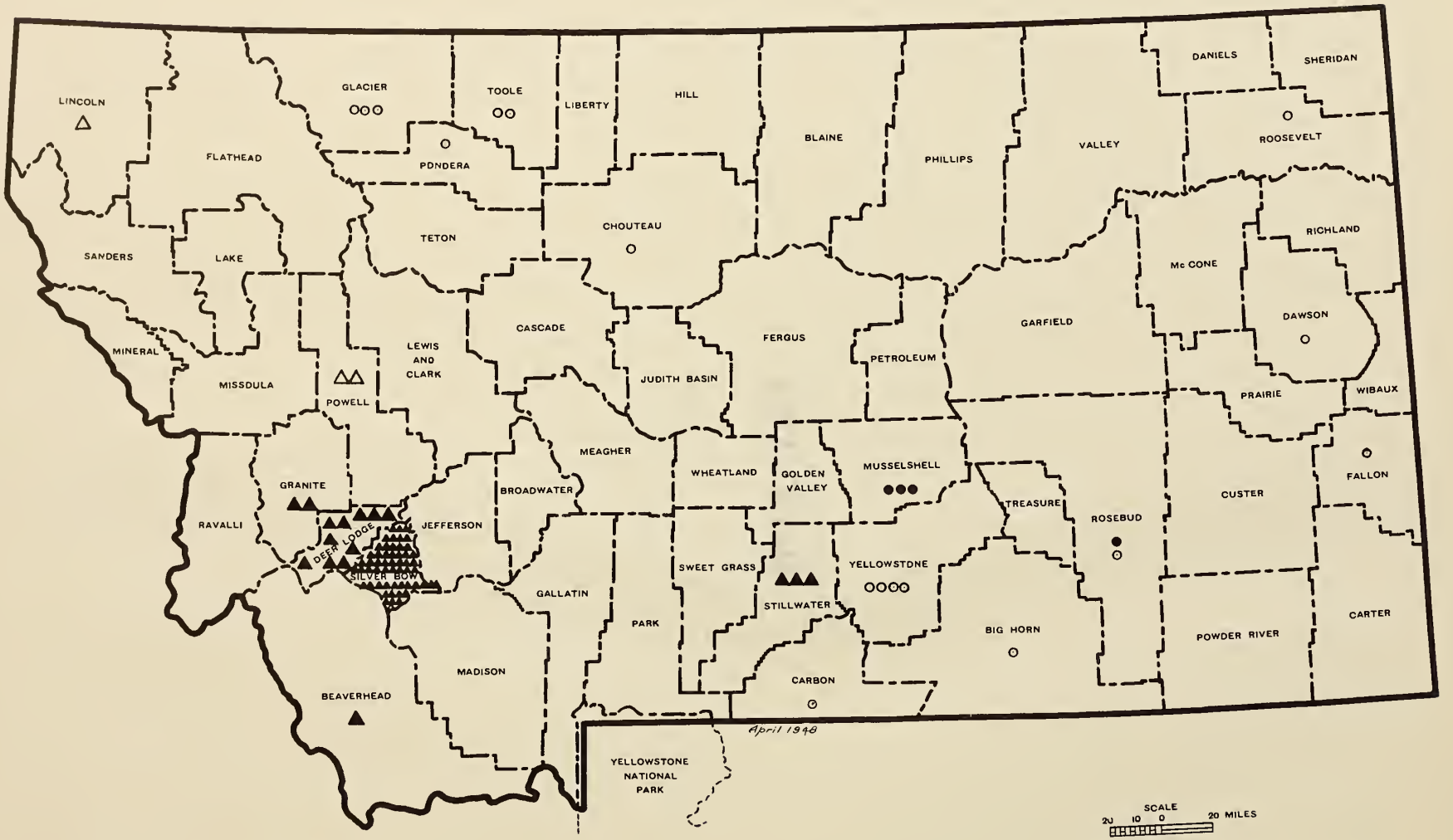
xxx Not applicable.
NA Not available.
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]Less than 0.5 percent.
[3]See table 2, footnote 3.
[4]Includes "not specified" as follows: for Bituminous coal, 35 percent; for Sand and gravel, 38 percent; for Barite, 16 percent.
[5]Mine water used is included with figure for water intake (except mine water), accounting for less than 5 percent of the total shown.

MONTANA

125-1

MINING IN MONTANA: 1954

Rank among States:
Employment, 19
Value of shipments, 18



▲ METAL MINING
● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$5,100
COAL MINING	9,200
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	12,000
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	8,800

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes common clay and shale and contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries		
	1954	1939[1]	1919[2]	1909[2]	1902[2 3]	1954	1939[1]	1929
Number of operating companies	544	474	(NA)	[4]638	[4]399	255	[4]276	(NA)
Number of establishments	583	(NA)	295	647	(NA)	291	(NA)	205
Number of mines and quarries	286	305	305	1,299	410	286	305	237
Number of oil and gas wells producing at end of year	4,411	2,067	28	...	...	...	...	...
Number of preparation plants	102	70	(NA)	(NA)	(NA)	101	70	(NA)
Value of shipments[5] $1,000	[6]148,747	44,701	49,924	54,992	28,265	[6]103,012	37,380	65,183
Value added in mining ..... do	[6]83,942	34,865	37,040	27,498	22,852	[6]51,096	28,509	54,052
Number of persons engaged, total	12,167	11,961	17,665	21,227	11,707	9,140	10,877	15,982
Production and development workers	8,936	10,291	16,392	19,570	[7]11,059	7,049	9,552	15,044
All other employees	2,669	1,308	976	881	648	1,815	1,085	[8]852
Proprietors and firm members	562	362	297	776	(NA)	276	240	[9]86
Performing manual labor	325	226	199	532	(NA)	218	175	(NA)
Man-hours worked by production and development workers 1,000	17,478	19,862	(NA)	(NA)	(NA)	13,324	18,518	(NA)
Principal expenses designated below, total $1,000	137,699	27,558	41,608	51,184	18,814	93,428	25,219	40,659
Wages of production and development workers ..... do	36,979	14,701	26,164	22,167	12,405	28,587	13,649	26,302
Salaries of all other employees ..... do	14,785	3,021	2,560	1,523	996	10,054	2,699	[8]3,226
Minerals received for preparation ..... do	35,711	(NA)	62	6,560	(NA)	35,560	(NA)	(NA)
Supplies ..... do	21,649	[10]6,940	9,653	16,756	5,283	[11]12,309	6,582	[12]8,398
Fuel[13] ..... do	2,270	[10]514	1,311	3,674		[11]1,047	380	[12]494
Purchased electric energy ..... do	2,231	[10]1,799	1,725			[11]2,052	1,778	[12]1,929
Contract work ..... do	24,074	[10]583	133	504	130	[11]3,819	131	310
Purchased machinery installed ..... do	10,554		(NA)			[14]4,241		1,374
Capital expenditures, total ..... do	31,680	(NA)	(NA)			[14]7,108	(NA)	(NA)
Development and exploration of mineral property ..... do	14,168		3,857	(NA)	(NA)	[14]1,250		5,039
Preparation plant construction ..... do	1,517	[10]393				[14]1,517	345	
Other construction ..... do	2,174		(NA)			[14]406		(NA)
New machinery and equipment ..... do	7,946	[10]1,995				[14]3,546	1,069	
Used plant and equipment ..... do	5,875	[10]334				[14]389	168	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	538	230	147	179	[9]67	[14]361	205	208
Per production worker	60	22	9	9	6	51	21	14
Prime movers 1,000	257	59	53	139	[9]64	[14]86	35	20
Electric motors driven by purchased energy ..... do	281	171	94	40	[9]3	[14]275	170	188
Horsepower rating of electric motors driven by energy generated at establishment ..... do	239	4	7	5	[9]4	[14]239	4	3
Energy used ..... million kwh equivalent	2,504	[10]1,237	(NA)			[14]1,256	[9]796	[9]1,390
Coal[15] ..... 1,000 short tons	13	[10]9	335			[14]13	[9]9	[9]138
Fuel oils ..... 1,000 barrels	140	[10]35	2	(NA)	(NA)	[14]57	[9]32	[9]5
Gas[15] ..... million cu.ft	5,158	[10]2,408	672			[14]2,118	[9]1,011	...
Electric energy purchased ..... million kwh	346	[10]340	(NA)			[14]336	[9]339	[9]318
Electric energy generated and used ..... do	3	[10]5	(NA)			...	[9]5	[9]4

NA Not available.

[1]Excludes data for dimension stone dressing plants, if any, operated in conjunction with 2 dimension stone quarries. For "Comparative statistics for all operations" includes data for one or two oil and gas field hauling operations, with receipts for services amounting to less than $417,000; such operations were not classified in the mineral industries for 1954. For the "Comparative statistics excluding the crude petroleum and natural gas extraction industries" includes data for one natural gasoline plant.

[2]Excludes data for sand and gravel operations. There were 7 such mines in 1939 with products valued at $338,000. Also, for 1919 and 1909 excludes data for any stone quarries operated as part of cement or lime establishments.

[3]Includes data for lime plants producing lime valued at $9,000.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[6]Excludes figures for the Uranium-radium-vanadium ores industry. No data on value of shipments were obtained for this industry.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Excludes data for nonproducing operations.

[10]Excludes data for contract service operations.

[11]Figures for fuels, electric energy, and contract work for crushed and broken stone and clay, ceramic, and refractory minerals classified in manufactures are included with figure for supplies.

[12]For nonproducing operations, figures for fuel and purchased electric energy are included with those for supplies.

[13]For 1954, represents purchased fuel only. For 1939, 1929, and 1919, includes the value of fuels produced and used at the same establishment for power or heat.

[14]Excludes statistics for crushed and broken stone and clay, ceramic, and refractory minerals operations classified in manufactures.

[15]Includes data for fuels produced and used at the same establishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Montana, total		Metal mining	
		Including operations classified in manufactures	Mineral industries only	Total	Lead and zinc ores
1	Number of operating companies	544	540	144	44
2	Number of establishments	583	578	158	47
	Number of mines, quarries, and producing oil and gas wells:				
3	1954	4,697	4,692	151	45
4	1939	2,372	(NA)	205	8
5	Number of preparation plants	102	102	37	8
	Value of shipments:[2]				
6	1954 ..... $1,000	[3]148,747	[3]147,547	[3]86,253	23,458
7	1939 ..... do	44,701	(NA)	(NA)	340
8	Value added in mining ..... do	[3]83,942	[3]82,867	[3]38,505	9,501
9	Number of persons engaged, total	12,167	12,130	7,705	1,967
10	Production and development workers	8,936	8,899	5,900	1,600
11	All other employees	2,669	2,669	1,635	318
12	Proprietors and firm members	562	562	170	49
13	Performing manual labor	325	325	144	40
	Man-hours worked by production and development workers:				
14	1954 1,000	17,478	17,406	11,267	2,833
15	1939 ..... do	19,862	(NA)	(NA)	[7]240
	At mines:				
16	Underground ..... do	8,236	8,218	7,409	1,982
17	Open-pit ..... do	537	483	108	5
18	Surface (mine shops, yards, etc.) ..... do	2,481	2,481	2,228	533
19	At preparation plants ..... do	2,091	2,091	1,522	313
20	At oil and gas field operation ..... do	4,133	4,133	xxx	xxx
21	Man-hours spent on development and exploration work (included above) ..... do	3,109	3,109	198	33
22	Principal expenses designated below, total $1,000	137,699	137,434	82,641	22,092
23	Wages of production and development workers ..... do	36,979	36,839	24,023	6,103
24	Salaries of all other employees ..... do	14,785	14,785	9,165	1,723
25	Minerals received for preparation ..... do	35,711	35,711	35,424	11,233
26	Supplies ..... do	21,649	21,524	10,065	2,379
	Purchased fuel:				
27	Coal ..... do	68	68	65	...
28	Fuel oils ..... do	741	741	101	6
29	Gas (natural or manufactured) ..... do	543	543	425	108
30	Other fuels ..... do	918	918	137	25
31	Purchased electric energy ..... do	2,231	2,231	1,775	444
32	Contract work ..... do	24,074	24,074	1,461	71
33	Purchased machinery installed ..... do	10,554	10,554	2,777	631
34	Capital expenditures, total ..... do	31,680	31,680	4,478	940
35	Development and exploration of mineral property ..... do	14,168	14,168	305	36
36	Preparation plant construction ..... do	1,517	1,517	1,126	342
37	Other construction ..... do	2,174	2,174	382	16
38	New machinery and equipment ..... do	7,946	7,946	2,539	528
39	Used plant and equipment ..... do	5,875	5,875	126	18
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	538	538	254	45
41	Per production worker	60	60	43	28
42	Prime movers 1,000	257	257	30	5
43	Electric motors driven by purchased energy ..... do	281	281	224	40
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	239	239	1	...
45	Energy used ..... million kwh equivalent	2,504	2,504	1,068	247
	Produced and used for fuel:				
46	Coal ..... 1,000 short tons	4	4	xxx	xxx
47	Natural gas ..... million cu.ft	1,919	1,919	xxx	xxx
	Purchased fuel:				
48	Coal ..... 1,000 short tons	9	9	7	...
49	Fuel oil ..... 1,000 barrels	140	140	16	1
50	Gas ..... million cu.ft	3,239	3,239	2,091	518
51	Electric energy purchased ..... million kwh	346	346	311	80
52	Electric energy generated and used ..... do	3	3	...	...
53	Water intake, including mine water used ..... million gallons	7,992	7,992	7,351	1,739
54	Per production worker ..... do	0.89	0.90	1.25	1.09

See footnotes at end of table.

AND INDUSTRY 1954 AND SELECTED COMPARATIVE STATISTICS 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Metal mining—Continued					Bituminous coal and lignite mining			
Gold and silver ores								
Gold (lode and placer)	Silver ores	Manganese ores	Tungsten ores	Other metal mining	Total	Bituminous coal	Lignite mining and Bituminous coal and lignite mining contract services	
31	14	25	15	17	38	26	12	1
32	14	31	15	19	39	27	12	2
32	14	30	15	15	38	27	11	3
142	28	16	...	11	76	59	17	4
15	5	3	4	2	5	5	...	5
151	466	10,964	2,237	[3]48,977	5,250	4,158	1,092	6
7,412	1,802	544	...	(NA)	4,095	4,019	76	7
159	384	4,957	1,857	[3]21,643	3,822	2,906	916	8
81	48	1,085	93	4,431	462	374	88	9
41	30	880	61	3,288	355	290	65	10
4	6	170	12	1,125	60	48	12	11
36	12	35	20	18	47	36	11	12
32	12	31	19	10	42	32	10	13
82	70	1,633	148	6,501	521	398	123	14
[7]3,960	884	[7]367	...	(NA)	1,790	1,699	91	15
58	43	1,049	15	4,262	288	268	20	16
8	1	...	44	50	110	(D)	103	17
4	7	286	20	1,378	(D)	(D)	...	18
12	19	298	69	811			...	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
47	16	52	19	31	...	...	...	21
237	232	10,465	844	48,771	2,913	2,324	589	22
119	119	3,463	374	20,434	1,202	868	334	23
14	15	824			280	200	80	24
...	...	5,155	270	[8]26,906	...	...	...	25
84	[8]80				330	197	133	26
...	...	7	...	58	2	...	2	27
6	6	29	14	40	10	2	8	28
...	...	142	...	256	...	...	...	29
11	4		16		18	11	7	30
1	8	220	25	1,077	88	66	22	31
2	([8])	625	145	([8])	983	980	3	32
93	5	81	197	1,770	851	228	623	33
205	21	252	287	2,773	854	232	622	34
117	18	33	65	36	5	5	...	35
4	...	85	21	674	...	...	...	36
3	...	15	4	344	17	17	...	37
20	3	95	189	1,704	634	12	622	38
61	...	24	8	15	198	198	...	39
4	2	34	5	164	51	16	35	40
([11])	([11])	39	82	50	144	55	538	41
3	2	4	4	12	15	5	10	42
1	([5])	30	1	152	36	11	25	43
1	...	...	([5])	...	238	238	...	44
5	4	245	9	558	62	39	23	45
xxx	xxx	xxx	xxx	xxx	4	4	...	46
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
...	...	1	...	6	2	...	2	48
2	1	4	2	6	2	([12])	2	49
...	...	(D)	...	(D)	...	...	...	50
([12])	1	36	2	192	6	6	2	51
...	...	...	...	...	...	...	([2])	52
37	129	1,065	240	4,141	20	6	14	53
([11])	([11])	1.21	3.93	1.26	0.06	0.02	0.22	54

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Crude petroleum and natural gas extraction				
		Total	Crude petroleum	Natural gas	Drilling oil and gas wells contract services	Natural gas liquids and Oil and gas field contract services, n.e.c.
1	Number of operating companies	289	193	14	38	47
2	Number of establishments	292	193	14	38	47
	Number of mines, quarries, and producing oil and gas wells:					
3	1954	4,411	3,398	999	14	...
4	1939	2,067	(NA)	(NA)	(NA)	(NA)
5	Number of preparation plants	1	xxx	xxx	xxx	1
	Value of shipments:[2]					
6	1954 ..... $1,000	45,735	30,791	1,532	9,272	4,140
7	1939 ..... do	(NA)	[4]6,839	([4])	363	(NA)
8	Value added in mining ..... do	[6]32,846	21,720	1,957	6,158	[6]3,011
9	Number of persons engaged, total	3,027	1,760	126	765	376
10	Production and development workers	1,887	769	109	694	315
11	All other employees	854	813	11	17	13
12	Proprietors and firm members	286	178	6	54	48
13	Performing manual labor	107	48	3	32	24
	Man-hours worked by production and development workers:					
14	1954 1,000	4,154	1,653	155	1,619	727
15	1939 ..... do	(NA)	[4]1,176	([4])	97	(NA)
	At mines:					
16	Underground ..... do	...	...	...	xxx	...
17	Open-pit ..... do	...	...	...	xxx	...
18	Surface (mine shops, yards, etc.) ..... do	...	...	...	xxx	...
19	At preparation plants ..... do	21	...	...	xxx	21
20	At oil and gas field operation ..... do	4,133	1,653	155	1,619	706
21	Man-hours spent on development and exploration work (included above) ..... do	2,862	826	31	1,493	512
22	Principal expenses designated below, total $1,000	[6]44,271	34,076	968	6,748	[6]2,479
23	Wages of production and development workers ..... do	8,392	3,443	377	3,344	1,228
24	Salaries of all other employees ..... do	4,731	4,510	61	81	79
25	Minerals received for preparation ..... do	[6]9,491	xxx	xxx	xxx	[6]796
26	Supplies ..... do		5,884	218	2,593	
	Purchased fuel:					
27	Coal ..... do	...	...	...	...	...
28	Fuel oil ..... do	466	60	...	398	8
29	Gas ..... do	113	65	...	47	1
30	Other fuels ..... do	644	276	10	155	203
31	Purchased electric energy ..... do	179	166	10	...	3
32	Contract work ..... do	20,255	19,672	292	130	161
33	Purchased machinery installed ..... do	6,313	2,350	2,830	757	376
34	Capital expenditures, total ..... do	24,572	19,402	3,785	966	419
35	Development and exploration of mineral property ..... do	12,918	12,652	243	23	...
36	Preparation plant construction ..... do	...	xxx	xxx	xxx	...
37	Other construction ..... do	1,768	1,701	43	3	21
38	New machinery and equipment ..... do	4,400	3,034	64	929	373
39	Used plant and equipment ..... do	5,486	2,015	3,435	11	25
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	177	92	17	44	24
41	Per production worker	94	120	156	63	76
42	Prime movers 1,000	171	86	17	44	24
43	Electric motors driven by purchased energy ..... do	6	6	([12])	...	...
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	([12])	([12])	...	...	...
45	Energy used ..... million kwh equivalent	1,248	496	86	391	275
	Produced and used for fuel:					
46	Coal ..... 1,000 short tons	xxx	xxx	xxx	...	xxx
47	Natural gas ..... million cu.ft	1,919	933	271	1	714
	Purchased fuel:					
48	Coal ..... 1,000 short tons	...	...	...	xxx	...
49	Fuel oil ..... 1,000 barrels	83	14	...	68	1
50	Gas ..... million cu.ft	1,121	346	...	766	9
51	Electric energy purchased ..... million kwh	10	10	([12])	...	([12])
52	Electric energy generated and used ..... do	3	2	...	1	...
53	Water intake, including mine water used ..... million gallons	192	98	...	58	36
54	Per production worker ..... do	0.10	0.13	...	0.08	0.11

xxx Not applicable. D Withheld to avoid approximately disclosing data for individual companies. NA Not available. [1]Includes 2 dimension stone quarries. [2]See table 1, footnote 5. [3]See table 1, footnote 6. [4]Figures for the Natural gas industry are included with those for the Crude petroleum industry. Man-hours exclude data for nonproducing operations. [5]Excludes data for one sandstone quarry. [6]No data were obtained for the value of gas received for processing at natural gas liquids plants or for the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown.

AND INDUSTRY: 1954 AND SELECTED COMPARATIVE STATISTICS: 1954 AND 1939—Continued

size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining										
Total		Crushed and broken stone			Sand and gravel	Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Chemical and fertilizer mineral mining		Miscellaneous nonmetallic minerals (except fuels) mining (including operations classified in manufactures)	
Including operations classified in manufactures	Mineral industries only	All stone (including operations classified in manufactures)	Limestone (mineral industries only)	Sandstone (mineral industries only)			Phosphate rock	Other industries		
76	72	13	3	4	42	7	6	3	8	1
94	89	17	3	4	52	7	6	3	9	2
97	92	17	3	4	52	7	9	3	9	3
[1]24	(NA)	8	(NA)	1	7	2	2	...	3	4
59	59	9	3	3	35	4	2	3	6	5
11,509	10,309	1,799	277	315	2,568	48	3,435	807	2,852	6
(NA)	(NA)	[5]195	(NA)	(NA)	338	(NA)	(NA)	...	(NA)	7
8,769	7,694	992	106	27	1,337	36	3,237	597	2,570	8
973	936	116	14	7	256	9	373	58	161	9
794	757	106	10	5	187	6	311	44	140	10
120	120	8	3	1	28	...	58	9	17	11
59	59	2	1	1	41	3	4	5	4	12
32	32	...	...	...	29	1	...	...	2	13
1,536	1,464	178	21	9	340	8	625	89	296	14
(NA)	(NA)	[5]130	(NA)	(NA)	97	(NA)	(NA)	...	(NA)	15
539	521	...	...	...	...	1	504	15	19	16
319	265	86	10	3	149	7	2	9	66	17
130	130	...	...	...	...	...	96	...	34	18
548	548	92	11	6	191	...	23	65	177	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
49	49	...	...	...	1	...	44	2	2	21
7,874	7,609	1,257	218	315	1,978	32	2,883	438	1,286	22
3,362	3,222	389	39	21	744	14	1,460	175	580	23
609	609	48	8	6	106	2	301	47	105	24
[9]2,050	1,925	...	...	...	(NA)	...	...	...	459	25
		[9]229	55	18	468	[9]4	775	115		26
[9]1	1	...	...	...	...	...	1	...	...	27
[9]164	164	[9]22	1	1	47	...	9	4	[9]82	28
[9]5	5	...	...	...	3	[9]1	...	1	...	29
[9]119	119	[9]22	3	2	71	...	9	8	[9]9	30
[9]189	189	[9]8	3	1	25	...	84	21	[9]51	31
[9]1,375	1,375	[9]539	109	266	514	[9]11	244	67	...	32
[10]613	613	[10]10	...	1	295	[10]3	203	10	[10]92	33
[10]1,776	1,776	[10]23	...	1	192	[10]7	1,127	16	[10]411	34
[10]940	940	...	...	...	2	[10]4	921	3	[10]10	35
[10]391	391	...	...	...	14	...	...	3	374	36
[10]7	7	[10]2	...	...	2	...	3	...	...	37
[10]373	373	[10]20	...	...	132	[10]3	190	8	[10]20	38
[10]65	65	[10]1	...	1	42	...	13	2	7	39
[10]56	56	[10]8	2	2	28	([12])	10	3	[10]7	40
71	74	75	196	365	149	xxx	32	68	56	41
[10]41	41	[10]5	1	1	24	([12])	5	2	[10]5	42
[10]15	15	[10]3	1	1	4	...	5	1	[10]2	43
...	...	...	...	...	...	...	...	...	...	44
[10]126	126	[10]10	1	1	37	[10]1	14	12	[10]50	45
...	...	...	...	...	...	...	...	...	...	46
...	...	...	...	...	...	...	...	...	...	47
([12])	([12])	...	...	...	...	...	([12])	...	...	48
[10]39	39	[10]3	([12])	([12])	9	...	2	1	[10]25	49
[10]27	27	...	...	...	13	[10]3	...	11	...	50
[10]19	19	([12])	([12])	([12])	1	...	9	4	[10]5	51
...	...	...	...	...	...	...	...	...	...	52
[10]429	429	...	...	...	254	...	20	30	125	53
0.54	0.57	...	...	...	1.36	...	0.06	0.68	0.89	54

[7]Excludes data for nonproducing operations. [8]Cost of contract work is included with cost of supplies. [9]See table 1, footnote 11. [10]See table 1, footnote 14. [11]Not shown since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers. [12]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Montana, all mineral operations:									
Including operations in manufactures	583	148,747	83,938	8,936	2,669	17,478	36,979	14,785	[2]25,805
Mineral industries only:									
Including crude petroleum and natural gas extraction	578	147,547	82,863	8,899	2,669	17,406	36,839	14,785	25,805
Excluding crude petroleum and natural gas extraction	286	102,812	50,017	7,012	1,815	13,252	28,447	10,054	6,719
Metal mining, total	158	[3]86,253	[3]38,501	5,900	1,635	11,267	24,023	9,165	4,352
Lead and zinc ores	47	23,458	9,501	1,600	318	2,833	6,103	1,723	922
Gold and silver ores	46	617	543	71	10	152	238	29	165
Iron ores, Copper ores, Ferro-alloy ores, Metal mining contract services, and Miscellaneous metal ores	65	[3]62,178	[3]28,457	4,229	1,307	8,282	17,682	7,413	3,265
Bituminous coal and lignite mining	39	5,250	3,822	355	60	521	1,202	280	656
Crude petroleum and natural gas extraction, total	292	45,735	[4]32,846	1,887	854	4,154	8,392	4,731	19,086
Crude petroleum and natural gas[5]	207	32,323	23,677	878	824	1,808	3,820	4,571	17,737
Natural gas liquids and Oil and gas field contract services[6]	85	13,412	(NA)	1,009	30	2,346	4,572	160	1,349
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	94	11,509	8,769	794	120	1,536	3,362	609	[2]1,711
Mineral industries only	89	10,309	7,694	757	120	1,464	3,222	609	1,711
Crushed and broken stone (including operations in manufactures)	17	1,799	992	106	8	178	389	48	[2]22
Sand and gravel	52	2,568	1,337	187	28	340	744	106	150
Clay, ceramic, and refractory minerals (including operations in manufactures)	7	48	36	6	...	8	14	2	[2]7
Chemical and fertilizer mineral mining	9	4,242	3,834	355	67	714	1,635	348	1,128
Miscellaneous nonmetallic minerals (except fuels) (including operations in manufactures)	9	2,852	2,570	140	17	296	580	105	[2]404
COUNTY									
Beaverhead	23	(D)	(D)	[7]75	(7)	(D)	(D)	(D)	(D)
Lead and zinc ores	12	117	106	[7]9	(7)	16	[7]40	(7)	10
Big Horn	9	(NA)	(NA)	[7]85	(7)	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	6	(NA)	(NA)	[7]75	(7)	(NA)	(NA)	(NA)	(NA)
Blaine	5	(NA)	(NA)	[7]42	(7)	(NA)	(NA)	(NA)	(NA)
Broadwater	13	168	159	[7]16	(7)	26	[7]51	(7)	27
Carbon:									
Including crude petroleum and natural gas	14	(NA)	(NA)	[7]75	(7)	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	7	160	127	23	4	37	82	14	...
Cascade	17	(NA)	(NA)	[7]58	(7)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	8	347	212	[7]40	(7)	60	[7]189	(7)	42
Custer	7	(NA)	(NA)	[5]57	(7)	(NA)	(NA)	(NA)	(NA)
Dawson	10	(NA)	(NA)	[7]70	(7)	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	3	(NA)	(NA)	[7]65	(7)	(NA)	(NA)	(NA)	(NA)
Deer Lodge	15	(D)	(D)	672	415	(D)	(D)	(D)	(D)
Fallon	8	(NA)	(NA)	[7]53	(7)	(NA)	(NA)	(NA)	(NA)
Fergus (mineral industries only)	6	(NA)	(NA)	[7]43	(7)	(NA)	(NA)	(NA)	(NA)
Flathead	6	494	108	28	4	47	96	20	14
Gallatin (including operations in manufactures)	7	445	340	31	(NA)	60	117	(NA)	(NA)
Garfield	5	(NA)	(NA)	[7]34	(7)	(NA)	(NA)	(NA)	(NA)
Glacier	47	(NA)	(NA)	[7]259	(7)	(NA)	(NA)	(NA)	(NA)
Granite	23	2,541	1,791	[7]175	(7)	357	[7]875	(7)	129
Hill	5	(NA)	(NA)	[7]25	(7)	(NA)	(NA)	(NA)	(NA)
Jefferson	17	221	204	[7]24	(7)	39	[7]92	(7)	58
Lead and zinc ores	7	148	125	[7]8	(7)	16	[7]32	(7)	5
Lewis and Clark	16	794	510	48	8	84	160	26	7
Nonmetallic minerals (except fuels) mining	5	748	468	36	6	64	129	21	...
Madison	12	327	238	25	3	51	78	11	83
Nonmetallic minerals (except fuels) mining	4	325	191	[7]13	(7)	28	[7]50	(7)	22

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Montana—Continued COUNTY—Continued									
Missoula	10	(NA)	(NA)	[7]32	([7])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	4	114	84	11	4	19	33	9	...
Musselshell	19	(NA)	(NA)	[7]305	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	10	1,719	1,501	251	33	333	745	142	30
Petroleum	3	(NA)	(NA)	[7]24	([7])	(NA)	(NA)	(NA)	(NA)
Pondera	14	(NA)	(NA)	[7]76	([7])	(NA)	(NA)	(NA)	(NA)
Powell (including operations in manufactures)	13	2,664	2,127	239	52	470	1,031	232	[2]340
Richland	5	(NA)	(NA)	[7]25	([7])	(NA)	(NA)	(NA)	(NA)
Roosevelt	7	(NA)	(NA)	[7]64	([7])	(NA)	(NA)	(NA)	(NA)
Rosebud	8	(NA)	(NA)	[7]116	([7])	(NA)	(NA)	(NA)	(NA)
Silver Bow	32	(D)	(D)	4,767	1,148	(D)	(D)	(D)	(D)
Teton	10	(NA)	(NA)	[7]18	([7])	(NA)	(NA)	(NA)	(NA)
Toole	89	(NA)	(NA)	[7]208	([7])	(NA)	(NA)	(NA)	(NA)
Valley	3	(NA)	(NA)	[7]39	([7])	(NA)	(NA)	(NA)	(NA)
Yellowstone(mineral industries only), total	22	(NA)	(NA)	[7]580	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	19	(NA)	(NA)	[7]545	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	3	479	311	29	6	54	132	28	23

D Withheld to avoid approximately disclosing data for individual companies.
NA Not available.
[1]See table 1, footnote 5.
[2]See table 1, footnote 14.
[3]See table 1, footnote 6.
[4]See table 2, footnote 6.
[5]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[6]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for such companies is included with the county data for the Crude petroleum and Natural gas industries.
[7]Figures for "All other employees" are included with those for "Production and development workers."
[8]In addition to data for establishments classified in the Crude petroelum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Montana, total	Beaver-head	Big Horn	Blaine	Broad-water	Carbon	Cascade	Custer	Dawson	Deer Lodge	Fallon	Fergus
All mineral operations, total	583	23	9	5	13	14	17	7	10	15	8	8
Classified in mineral industries	578	23	9	5	13	14	17	7	10	15	8	6
Included in manufactures	5	...	...	...	...	...	...	...	...	...	...	2
Metal mining:												
Iron ores	1	...	...	...	1	...	...	...	...	...	...	...
Copper ores	8	...	...	...	...	...	...	...	...	1	...	...
Lead and zinc ores:												
Ores valued chiefly for lead	44	12	...	...	5	...	2	...	...	...	...	...
Ores valued chiefly for zinc	3	...	...	...	...	...	...	...	...	1	...	...
Gold and silver ores:												
Lode gold	27	1	...	...	5	...	...	...	...	1	...	...
Placer gold	5	...	...	...	...	...	...	...	...	...	...	...
Silver ores	14	2	...	...	...	...	1	...	...	...	...	...
Ferro-alloy ores (except vanadium):												
Manganese ores	31	3	...	...	...	...	...	...	...	1	...	...
Tungsten ores	15	4	...	...	...	...	...	...	...	5	...	...
Chromium ores	1	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	3	...	...	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	6	...	1	...	...	...	...	...	...	...	...	...
Bituminous coal and lignite mining:												
Bituminous coal	27	...	1	2	...	5	4	...	...	...	...	2
Lignite	11	...	...	...	...	...	...	2	3	...	...	...
Bituminous coal and lignite mining contract services	1	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	207	...	6	3	...	7	2	1	3	...	6	2
Natural gas liquids	1	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	84	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	3	...	...	...	...	...	...	...	...	1	...	...
Included in manufactures	2	...	...	...	...	...	...	...	...	...	...	...
Granite	3	...	1	...	...	...	...	...	...	...	...	...
Trap rock	1	...	...	...	...	...	...	...	...	...	...	...
Sandstone	4	...	...	...	...	...	...	...	...	1	...	...
Stone, n.e.c.	4	...	...	...	1	...	...	...	...	...	...	...
Sand and gravel	52	...	...	...	1	2	6	4	4	2	1	1
Clay, ceramic, and refractory minerals:												
Fire clay	2	...	...	...	...	...	1	...	...	1	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	3	...	...	...	...	...	1	...	...	...	...	...
Included in manufactures	2	...	...	...	...	...	...	...	...	...	...	1
Chemical and fertilizer mineral mining:												
Barite	1	...	...	...	...	...	...	...	...	...	...	...
Fluorspar	1	...	...	...	...	...	...	...	...	...	...	...
Phosphate rock	6	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	1	...	...	...	...	...	...	...	...	1	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum:												
Classified in mineral industries	1	...	...	...	...	...	...	...	...	...	...	1
Included in manufactures	1	...	...	...	...	...	...	...	...	...	...	1
Mica	1	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	1	...	...	...	...	...	...	...	...	...	1	...
Talc, soapstone, and pyrophyllite	4	1	...	...	...	...	...	...	...	...	...	...
Vermiculite	1	...	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Flat-head	Galla-tin	Gar-field	Glacier	Granite	Hill	Jeffer-son	Judith Basin	Lewis and Clark	Liberty	Lin-coln	Mc-Cone
All mineral operations, total	6	7	5	47	23	5	17	4	16	4	4	2
Classified in mineral industries	6	6	5	47	23	5	17	4	16	4	4	2
Included in manufactures	...	1	...	...	...	...	...	...	...	...	...	...
Metal mining:												
Iron ores	...	...	...	...	...	...	...	...	...	...	...	...
Copper ores	...	...	...	...	1	...	...	...	1	...	...	...
Lead and zinc ores:												
Ores valued chiefly for lead	...	1	...	...	2	...	7	1	3	...	...	...
Ores valued chiefly for zinc	...	...	...	...	...	...	...	...	...	...	1	...
Gold and silver ores:												
Lode gold	...	...	...	...	2	...	2	...	6	...	...	...
Placer gold	...	...	...	...	1	...	...	...	...	...	...	...
Silver ores	...	...	...	...	3	...	2	2	1	...	...	...
Ferro-alloy ores (except vanadium):												
Manganese ores	...	...	...	...	9	...	...	...	...	...	...	...
Tungsten ores	...	...	...	...	4	...	1	...	...	...	...	...
Chromium ores	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	1	...	...	...	...	...
Uranium-radium-vanadium ores	...	...	...	...	...	...	4	...	...	...	...	...
Bituminous coal and lignite mining:												
Bituminous coal	...	...	...	...	...	1	...	...	...	...	...	...
Lignite	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal and lignite mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	...	...	5	46	...	2	...	...	...	4	...	2
Natural gas liquids	...	...	...	1	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	1	...	...	...	1	...	...	...
Included in manufactures	...	1	...	...	...	...	...	...	...	...	...	...
Granite	...	...	...	...	...	...	...	...	2	...	...	...
Trap rock	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	1	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	5	4	...	...	...	1	...	1	2	...	2	...
Clay, ceramic, and refractory minerals:												
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	1	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Barite	...	...	...	...	...	...	...	...	...	...	...	...
Fluorspar	...	...	...	...	...	...	...	...	...	...	...	...
Phosphate rock	...	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Mica	...	1	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	...	...	...	...	...	...	...	...	...	...	...	...
Vermiculite	...	...	...	...	...	...	...	...	...	...	1	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Madison	Meagher	Mineral	Missoula	Musselshell	Park	Petroleum	Phillips	Pondera	Powder River	Powell	Prairie	Ravalli
All mineral operations, total	12	2	4	10	19	3	3	2	14	1	13	1	1
Classified in mineral industries	12	2	4	10	19	3	3	2	14	1	12	1	1
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1	...	...
Metal mining:													
Iron ores	...	...	...	...	...	...	...	...	...	...	...	...	...
Copper ores	...	...	...	...	...	...	...	...	...	...	...	...	...
Lead and zinc ores:													
Ores valued chiefly for lead	1	1	3	1	...	1	...	...	...	...	2	...	...
Ores valued chiefly for zinc	...	...	...	...	...	...	...	...	...	...	...	...	...
Gold and silver ores:													
Lode gold	5	...	...	1	...	...	...	...	...	...	3	...	...
Placer gold	...	1	1	...	...	...	...	...	...	...	...	...	...
Silver ores	...	...	...	...	...	...	...	...	...	...	...	...	...
Ferro-alloy ores (except vanadium):													
Manganese ores	...	...	...	...	...	...	...	...	...	...	2	...	...
Tungsten ores	1	...	...	...	...	...	...	...	...	...	...	...	...
Chromium ores	...	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	1	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal and lignite mining:													
Bituminous coal	...	...	...	...	10	...	...	...	...	...	...	...	...
Lignite	...	...	...	...	...	...	...	...	...	1	...	...	...
Bituminous coal and lignite mining contract services	...	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:													
Crude petroleum and natural gas[1]	...	...	...	...	8	...	3	1	13	...	...	1	...
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:													
Crushed and broken stone:													
Limestone:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...	...	...
Trap rock	...	...	...	...	...	1	...	...	...	...	...	...	...
Sandstone	...	...	...	2	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	1	1	...	...	...	...	1	...	...	...
Sand and gravel	...	...	...	4	...	1	...	1	...	...	1	...	...
Clay, ceramic, and refractory minerals:													
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	1	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:													
Barite	...	...	...	1	...	...	...	...	...	...	...	...	...
Fluorspar	...	...	...	...	...	...	...	...	...	...	...	...	1
Phosphate rock	1	...	...	...	...	...	...	...	...	...	3	...	...
Chemical and fertilizer mineral mining, n.e.c.	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):													
Gypsum:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Mica	...	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	3	...	...	...	...	...	...	...	...	...	...	...	...
Vermiculite	...	...	...	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Richland	Roosevelt	Rosebud	Sanders	Sheridan	Silver Bow	Stillwater	Teton	Toole	Valley	Wibaux	Yellowstone	Yellowstone National Park
All mineral operations, total	5	7	8	3	3	32	3	10	89	3	2	23	2
Classified in mineral industries	5	7	8	3	3	32	3	10	89	3	2	22	2
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	1	...
Metal mining:													
Iron ores	...	...	...	...	...	...	...	...	...	...	...	...	...
Copper ores	...	...	...	1	...	4	...	...	...	...	...	...	...
Lead and zinc ores:													
Ores valued chiefly for lead	...	...	...	2	...	...	...	...	...	...	...	...	...
Ores valued chiefly for zinc	...	...	...	...	...	1	...	...	...	...	...	...	...
Gold and silver ores:													
Lode gold	...	...	...	...	...	1	...	...	...	...	...	...	...
Placer gold	...	...	...	...	1	1	...	...	...	...	...	...	...
Silver ores	...	...	...	...	...	3	...	...	...	...	...	...	...
Ferro-alloy ores (except vanadium):													
Manganese ores	...	...	...	...	...	16	...	...	...	...	...	...	...
Tungsten ores	...	...	...	...	...	...	...	...	...	...	...	...	...
Chromium ores	...	...	...	...	...	...	1	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	2	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	...	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal and lignite mining:													
Bituminous coal	...	...	2	...	...	...	...	...	...	...	...	...	...
Lignite	3	...	...	...	2	...	...	...	...	...	...	...	...
Bituminous coal and lignite mining contract services	...	...	1	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:													
Crude petroleum and natural gas[1]	2	7	5	...	...	...	1	9	88	2	2	19	2
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:													
Crushed and broken stone:													
Limestone:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...	...	...
Trap rock	...	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	...	...	...	...	...	2	1	1	1	1	...	3	...
Clay, ceramic, and refractory minerals:													
Fire clay	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	1	...
Chemical and fertilizer mineral mining:													
Barite	...	...	...	...	...	...	...	...	...	...	...	...	...
Fluorspar	...	...	...	...	...	...	...	...	...	...	...	...	...
Phosphate rock	...	...	...	...	...	2	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):													
Gypsum:													
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...	...
Mica	...	...	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	...	...	...	...	...	...	...	...	...	...	...	...	...
Vermiculite	...	...	...	...	...	...	...	...	...	...	...	...	...

NA Not available.
[1]See table 3, footnote 5, and for counties, footnote 8.
[2]See table 3, footnote 6.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 employees and over
Montana, all mineral operations:												
Including operations classified in manufactures	583	140	259	93	35	27	13	10	2	2	1	1
Mineral industries only	578	140	256	92	35	26	13	10	2	...	...	...
Metal mining, total	158	79	46	14	5	3	3	3	1	2	1	1
Iron ores	1	1	...	...	...	...	...	...	...	...	...	...
Copper ores	8	1	3	1	...	1	...	...	...	1	...	1
Lead and zinc ores:												
Ores valued chiefly for lead	44	26	13	3	1	1	...	...	...	...	...	...
Ores valued chiefly for zinc	3	...	1	...	...	...	...	1	...	...	1	...
Gold and silver ores:												
Lode gold	27	15	8	4	...	...	...	...	...	...	...	...
Placer gold	5	3	2	...	...	...	...	...	...	...	...	...
Silver ores	14	4	7	2	1	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Manganese ores	31	18	4	2	2	...	2	2	...	1	...	...
Tungsten ores	15	9	4	1	...	...	1	...	...	...	...	...
Chromium ores	1	...	...	...	...	...	...	...	1	...	...	...
Metal mining contract services:												
Copper ores contract services	1	...	...	...	1	...	...	...	...	...	...	...
Tungsten ores contract services	1	...	1	...	...	...	...	...	...	...	...	...
Other metal mining contract services	1	...	...	...	...	1	...	...	...	...	...	...
Uranium-radium-vanadium ores	6	2	3	1	...	...	...	...	...	...	...	...
Bituminous coal and lignite mining, total	39	6	20	7	2	1	2	1	...	...	...	...
Bituminous coal	27	2	14	6	2	1	1	1	...	...	...	...
Lignite	11	4	6	1	...	...	...	...	...	...	...	...
Bituminous coal and lignite mining contract services	1	...	...	...	...	...	1	...	...	...	...	...
Crude petroleum and natural gas extraction, total	292	35	152	53	23	18	6	5	...	...	...	...
Crude petroleum and Natural gas	207	32	121	26	12	9	4	3	...	...	...	...
Natural gas liquids	1	...	...	1	...	...	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	38	1	9	12	7	5	2	2	...	...	...	...
Oil and gas field contract services, n.e.c	46	2	22	14	4	4	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	94	20	41	19	5	5	2	1	1	...	...	...
Mineral industries only	89	20	38	18	5	4	2	1	1	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	3	...	1	2	...	...	...	...	...	...	...	...
Included in manufactures	2	...	1	...	...	1	...	...	...	...	...	...
Granite	3	1	...	2	...	...	...	...	...	...	...	...
Trap rock	1	...	...	...	1	...	...	...	...	...	...	...
Sandstone	4	2	1	1	...	...	...	...	...	...	...	...
Stone, n.e.c	4	1	2	...	...	1	...	...	...	...	...	...
Sand and gravel	52	11	28	8	2	2	1	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay	2	1	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	3	1	2	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	2	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Barite	1	...	...	...	1	...	...	...	...	...	...	...
Fluorspar	1	...	...	1	...	...	...	...	...	...	...	...
Phosphate rock	6	1	1	1	1	...	1	...	1	...	...	...
Chemical and fertilizer mineral mining, n.e.c	1	...	...	...	...	1	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum:												
Classified in mineral industries	1	...	...	1	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Mica	1	1	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	1	1	...	...	...	...	...	...	...	...	...	...
Talc, soapstone, and phyrophyllite	4	...	2	2	...	...	...	...	...	...	...	...
Vermiculite	1	...	...	...	...	...	...	1	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Montana, total	8,899	82,863	7,739	0.87	93	6,180	253	4,087	8,449	16	6	2	76
Metal mining, total	5,900	38,501	7,150	1.21	186	5,662	201	3,764	7,271	16	3	(4)	81
Lead and zinc ores	1,600	9,501	1,727	1.08	182	1,352	12	350	1,739	20	1	...	79
Gold and silver ores	71	543	24	0.34	44	13	142	118	185	...	50	50	...
Ferro-alloy ores, except chromium and vanadium:													
Manganese ores	880	4,957	1,042	1.18	210	843	23	546	1,336	10	...	...	90
Tungsten ores	61	1,857	240	3.93	129	234	...	...	240	...	60	...	40
All other metal mining industries	3,288	21,643	4,117	1.27	193	3,220	24	2,750	3,900	17	(4)	...	83
Bituminous coal and lignite mining, total	355	3,822	20	0.06	5	...	...	38	20	30	...	70	...
Bituminous coal	290	2,906	6	0.02	2	...	...	...	6	100	...	...	...
Lignite and bituminous coal and lignite mining contract services	65	916	14	0.22	15	...	...	38	14	...	...	100	...
Crude petroleum and natural gas extraction, total	1,887	[5]32,846	192	0.10	6	195	xxx	xxx	[6]193	1	30	59	10
Crude petroleum and natural gas	878	23,677	98	0.11	4	195	xxx	xxx	(NA)	1	16	75	[7]8
Drilling oil and gas wells contract services	694	6,158	58	0.08	9	...	xxx	xxx	(NA)	2	72	7	[7]19
Natural gas liquids and Oil and gas contract services, n.e.c.	315	[5]3,011	36	0.11	12	...	xxx	xxx	(NA)	...	...	100	...
Nonmetallic minerals (except fuels) mining, total	757	7,694	377	0.50	49	323	52	285	1,025	23	52	13	12
Crushed and broken stone	81	664	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	187	1,337	205	1.10	153	205	49	285	205	43	35	...	[7]22
Clay, ceramic, and refractory minerals	3	15	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining	355	3,834	47	0.13	12	47	3	...	50	...	...	100	...
Miscellaneous nonmetallic minerals (except fuels)	131	1,844	125	0.95	68	71	...	...	770	...	100	...	...

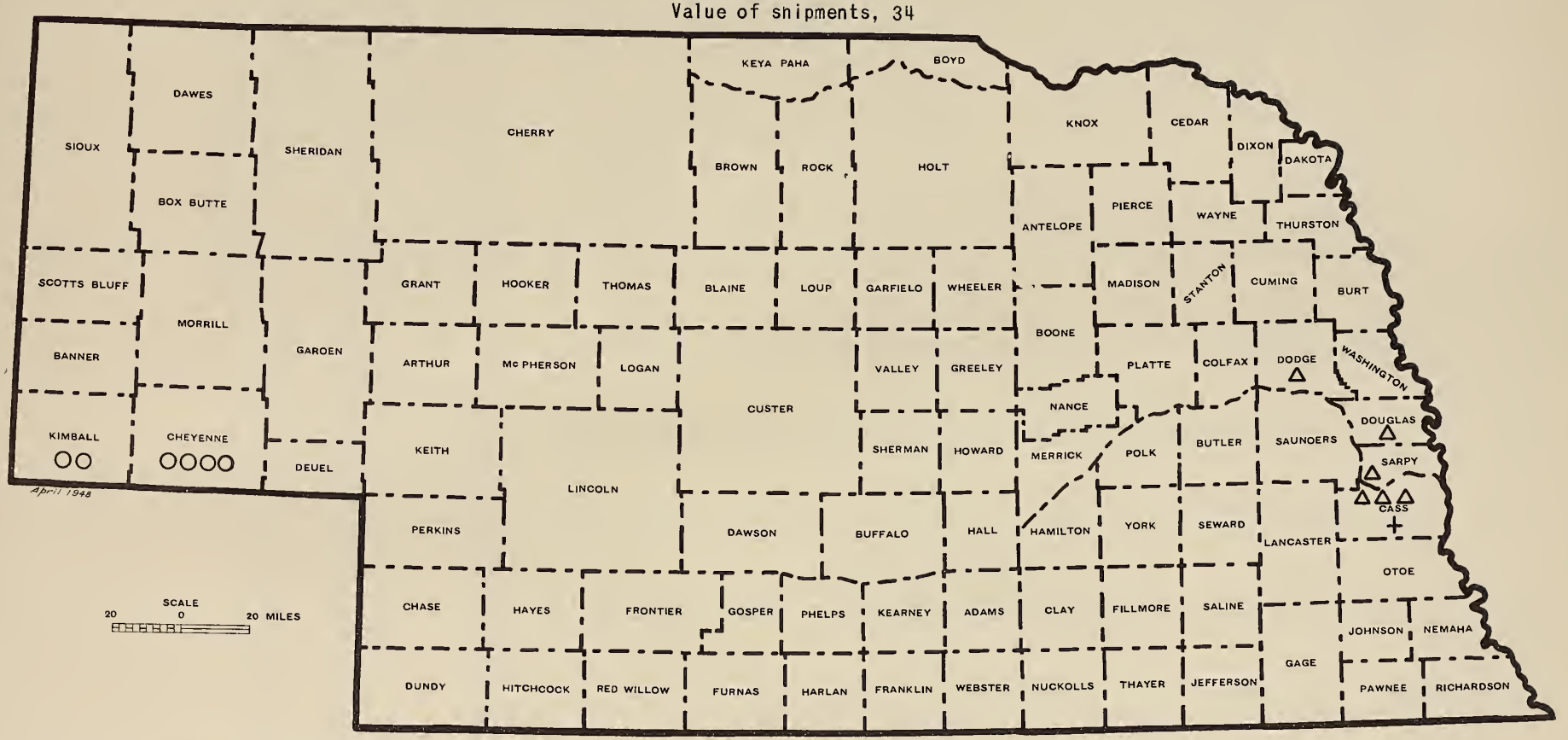
NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 21 million gallons of brackish water.
[3]For computations of water intake per production worker; including mine water used, see table 2.
[4]Less than 0.5 percent.
[5]See table 2, footnote 6.
[6]For industries other than natural gas liquids, includes water intake only.
[7]Represents "not specified."

NEBRASKA

126-1

MINING IN NEBRASKA: 1954

Rank among States:
Employment, 39
Value of shipments, 34



○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

CRUDE PETROLEUM AND NATURAL GAS EXTRACTION. $34,000
NONMETALLIC MINERALS (EXCEPT FUELS) MINING. 7,200

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations					
	1954	1939[1]	1929[2]	1954	1939[1]	1929[3]	1919[4]	1909[4]	1902
Number of operating companies	235	40	(NA)	113	[5]11	(NA)	(NA)	[5]18	[5]35
Number of establishments	259	(NA)	24	119	(NA)	6	9	18	(NA)
Number of mines and quarries	172	64	48	29	18	8	9	20	36
Number of oil and gas wells producing at end of year	559	...	(NA)	559	...	(NA)	...	...	...
Number of preparation plants	143	47	(NA)	22	6	(NA)	(NA)	(NA)	(NA)
Value of shipments[6]....$1,000	38,400	1,351	2,140	31,182	614	460	293	323	148
Value added in mining....do	30,082	930	1,749	25,082	444	364	211	260	137
Number of persons engaged, total	1,947	567	351	1,094	238	157	186	388	190
Production and development workers	1,531	470	279	902	211	137	162	352	[7]178
All other employees	203	61	[8]68	131	21	[8]20	19	20	12
Proprietors and firm members	213	36	4	61	6	..	5	16	(NA)
Performing manual labor	113	12	(NA)	25	1	...	1	4	(NA)
Man-hours worked by production and development workers....1,000	3,450	1,041	(NA)	1,905	479	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000	23,270	872	1,068	18,637	369	338	275	250	115
Wages of production and development workers....do	6,062	365	481	3,778	173	182	166	170	96
Salaries of all other employees....do	898	86	[8]196	651	26	[8]60	27	17	8
Minerals received for preparation....do	[9]6,114	(NA)	(NA)	[9]4,957	(NA)	(NA)	...	...	(NA)
Supplies....do		183	179		61	74	61	35	
Purchased fuel....do	[9]1,319	89	36	[9]688	24	6	12	22	11
Purchased electric energy....do	[9]218	76	171	[9]98	14	16	9		
Contract work....do	[9]8,659	73	5	[9]8,465	71	...	...	6	...
Purchased machinery installed....do	[10]8,395		140	[10]7,523		29	(NA)		
Capital expenditures, total....do	[10]16,387	(NA)	(NA)	[10]15,631	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do	[10]7,325		...	[10]7,295		...	42	(NA)	(NA)
Preparation plant construction....do	[10]42	15		[10]28	(11)				
Other construction....do	[10]525		(NA)	[10]512		(NA)	(NA)		
New machinery and equipment....do	[10]7,732	76		[10]7,289	40				
Used plant and equipment....do	[10]763	11		[10]507	...				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[10]158	16	11	[10]79	3	2	2	1	(11)
Per production worker	103	34	39	88	14	15	12	3	2
Prime movers....1,000	[10]145	8	2	[10]73	1	(11)	1	1	(11)
Electric motors driven by purchased energy....do	[10]13	8	9	[10]6	2	2	1	...	...
Horsepower rating of electric motors driven by energy generated at establishment....do	[10]1	...	...	[10]1	...	...	...	...	...
Energy used....million kwh equivalent	[10]692	56	38	[10]509	10	4	(NA)		
Coal....1,000 short tons	(11)	1	3	(11)	(11)	(11)	2		
Fuel oils....1,000 barrels	[10]103	13	1	[10]63	3	1	...	(NA)	(NA)
Gas....million cu.ft	[10]1,080	1	...	[10]1,072	...	...	...		
Electric energy purchased....million kwh	[10]13	4	8	[10]6	1	1	(NA)		
Electric energy generated and used....do	[10]1	(11)	...	[10]1	(11)	...	(NA)		

NA Not available.

[1]Excludes data for dimension stone dressing plants, if any, operated in conjunction with 3 dimension limestone quarries.

[2]Excludes data for common clay and shale pits and for crude petroleum and natural gas extraction operations, if any. There were 8 such clay pits in 1939 with products valued at $57,000, 2 nonproducing operations in the crude petroleum and natural gas industry, and one oil and gas field contract service operation.

[3]Excludes data for crude petroleum and natural gas extraction operations, if any.

[4]Excludes data for stone quarries operated as part of cement and lime plants, if any. There was one such quarry in 1929. For 1909 also excludes data for one nonproducing coal mine.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplicatioon due to the same company operating in more than one industry.

[6]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees, if any, at central offices not included in reports for mining and mineral preparation establishments.

[9]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[10]Excludes statistics for crushed stone and clay operations classified in manufactures.

[11]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Nebrsska, total		Crude petroleum snd natural gas extrsction			
		Including operations classified in manu-factures	Mineral industries only	Total	Crude petroleum and natursl gas	Drilling oil snd gas wells contract services	Nstural gss liquids snd Oil and gas field contract services, n.e.c.
1	Number of operating companies	235	228	89	65	13	12
2	Number of establishments	259	249	91	66	13	12
	Number of mines, quarries, and producing oil and gas wells:						
3	1954	731	721	559	546	13	...
4	1939	64	(NA)	...	...	...	...
5	Number of preparation plants	139	139	1	xxx	xxx	1
	Value of shipments:[2]						
6	1954 ..... $1,000	38,400	36,817	26,270	21,444	3,774	1,052
7	1939 ..... do	1,351	(NA)	29	...	...	29
8	Value added in mining ..... do	30,082	29,222	[4]22,077	18,551	2,667	([4])
9	Number of persons engaged, total	1,947	1,849	691	362	229	100
10	Production and development workers	1,531	1,433	544	257	194	93
11	All other employees	203	203	99	67	25	7
12	Proprietors and firm members	213	213	48	38	10	...
13	Performing manual labor	113	113	17	15	2	...
	Man-hours worked by production and development workers:						
14	1954 1,000	3,450	3,253	1,062	505	351	206
15	1939 ..... do	1,041	(NA)	11	...	...	11
	At mines:						
16	Underground ..... do	418	418	xxx	xxx	xxx	xxx
17	Open-pit ..... do	951	754	xxx	xxx	...	...
18	Surface (mine shops, yards, etc.) ..... do	9	9	xxx	xxx	...	xxx
19	At preparation plants ..... do	1,048	1,048	38	xxx	xxx	38
20	At oil and gas field operations ..... do	1,024	1,024	1,024	505	351	168
21	Man-hours spent on development and exploration work (included above) ..... do	965	965	560	206	351	3
22	Principal expenses designated below, total $1,000	23,270	22,220	[4]15,207	12,099	2,500	[4]515
23	Wages of production and development workers ..... do	6,062	5,735	2,407	1,180	866	361
24	Salaries of all other employees ..... do	898	898	505	293	177	35
25	Minerals received for preparation ..... do	} 6,114	5,391	[4]3,492	{ xxx	...	} [4]77
26	Supplies ..... do				2,222	1,100	
	Purchased fuel:						
27	Coal ..... do	[6]1	1	...	...	...	...
28	Fuel oils ..... do	[6]492	492	139	96	43	...
29	Gas ..... do	[6]143	143	140	140	...	...
30	Other fuels ..... do	[6]683	683	143	45	78	20
31	Purchased electric energy ..... do	[6]218	218	58	50	...	8
32	Contract work ..... do	[6]8,659	8,659	8,323	8,073	236	14
33	Purchased machinery installed ..... do	[7]8,395	8,395	6,732	6,211	489	32
34	Capital expenditures, total ..... do	[7]16,387	16,387	14,834	13,944	839	51
35	Development and exploration of mineral property ..... do	[7]7,325	7,325	7,269	7,090	179	...
36	Preparation plant construction ..... do	[7]42	42	11	...	...	11
37	Other construction ..... do	[7]525	525	509	508	...	1
38	New machinery and equipment ..... do	[7]7,732	7,732	6,737	6,281	} 660	39
39	Used plant and equipment ..... do	[7]763	763	308	65		
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[7]158	158	48	31	13	4
41	Per production worker	103	110	88	121	67	43
42	Prime movers 1,000	[7]145	145	46	29	13	4
43	Electric motors driven by purchased energy ..... do	[7]13	13	2	2	...	([8])
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	[7]1	1	([8])	([8])	...	...
45	Energy used ..... million kwh equivalent	[7]692	692	428	332	31	65
	Produced and used for fuel:						
46	Crude petroleum ..... 1,000 barrels	1	1	1	1	...	...
47	Natural gas ..... million cu.ft	[7]624	624	624	433	...	191
	Purchased fuel:						
48	Coal ..... 1,000 short tons	([8])	([8])	...	...	...	...
49	Fuel oil ..... 1,000 barrels	[7]102	102	32	25	7	...
50	Gas ..... million cu.ft	[7]456	456	448	448	...	...
51	Electric energy purchased ..... million kwh	[7]13	13	4	3	...	1
52	Electric energy generated and used ..... do	[7]1	1	([8])	([8])	...	...
53	Water intake, including mine water used ..... million gallons	[7]2,889	2,889	233	178	31	24
54	Per production worker ..... do	1.89	2.02	0.43	0.69	0.16	0.25

xxx Not applicable. NA Not available. [1]Represents 3 dimension limestone quarries and 3 natural abrasives mines. [2]See table 1, footnote 6. [3]Data for 3 dimension limestone quarries and 3 natural abrasives mines are included with those for Crushed and broken limestone. [4]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining						
Total		Crushed and broken limestone (including operations classified in manufactures)	Sand and gravel	Clay, ceramic, and refractory minerals, n.e.c. (including operations classified in manufactures)	Fire clay, Nonmetallic minerals (except fuels) contract services, and Pumice and pumicite (including operations classified in manufactures)	
Including operations classified in manufactures	Mineral industries only					
146	139	21	117	7	3	1
168	158	25	132	8	3	2
172	162	26	135	8	3	3
64	(NA)	12	38	8	[1]6	4
138	138	16	119	1	2	5
12,130	10,547	4,700	6,994	224	212	6
1,322	(NA)	[3]585	681	56	([3])	7
8,005	7,145	2,820	4,803	197	185	8
1,256	1,158	393	834	19	10	9
987	889	351	610	19	7	10
104	104	32	72	...	...	11
165	165	10	152	...	3	12
96	96	5	88	...	3	13
2,388	2,191	790	1,545	39	14	14
1,030	(NA)	[3]469	506	55	([3])	15
418	418	408	10	...	...	16
951	754	173	[5]738	35	5	17
9	9	...	(NA)	...	9	18
1,010	1,010	209	797	4	...	19
xxx	xxx	xxx	xxx	xxx	xxx	20
405	405	403	2	...	...	21
8,063	7,013	3,380	4,548	85	50	22
3,655	3,328	1,348	2,226	58	23	23
393	393	146	247	...	...	24
...	...	...	(NA)	...	...	25
[6]2,622	1,899		1,131			26
[6]1	1		1			27
[6]353	353		197			28
[6]3	3	1,886	3	27	27	29
[6]540	540		430			30
[6]160	160		119			31
[6]336	336		194			32
[7]1,663	1,663		872			33
[7]1,553	1,553		756			34
[7]56	56		30			35
[7]31	31		14			36
[7]16	16		13			37
[7]995	995		443			38
[7]455	455		256			39
[7]110	110		78			40
111	124		127			41
[7]99	99		71			42
[7]11	11	(NA)	7	(NA)	(NA)	43
[7]1	1		...			44
[7]264	264		183			45
...	...		...			46
...	...		...			47
([8])	([8])		([8])			48
[7]70	70		40			49
[7]8	8		8			50
[7]9	9		7			51
[7]1	1		...			52
[7]2,656	2,656		2,647			53
2.69	2.99		4.34			54

the figurea for cost of minerals received for preparation and figures for value added in mining may bear a reasonable relationship to other statistics shown. Such eatimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown, for these industries. [5]Includes man-hours worked on floating equipment. [6]See table 1, footnote 9. [7]See table 1, footnote 10. [8]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Nebraska, all mineral operations: Including operations in manufactures	259	38,400	30,082	1,531	203	3,450	6,062	898	[2]15,624
Mineral industries only	249	36,817	29,222	1,433	203	3,253	5,735	898	15,624
Crude petroleum and natural gas extraction, total	91	26,270	22,077	544	99	1,062	2,407	505	14,526
Crude petroleum and natural gas[3]	66	21,444	18,551	257	67	505	1,180	293	13,879
Natural gas liquids and Oil and gas field contract services[4]	25	4,826	(NA)	287	32	557	1,227	212	647
Nonmetallic minerals (except fuels) mining, total: Including operations in manufactures	168	12,130	8,005	987	104	2,388	3,655	393	[2]1,098
Mineral industries only	158	10,547	7,145	889	104	2,191	3,328	393	1,098
Crushed and broken stone (including operations in manufactures)	25	4,700	2,820	351	32	790	1,348	146	[2]579
Sand and gravel	132	6,994	4,803	610	72	1,545	2,226	247	500
Clay, ceramic, and refractory minerals, Nonmetallic minerals (except fuels) contract services, and Miscellaneous nonmetallic minerals (except fuels) (including operations in manufactures)	11	436	382	26	...	53	81	...	[2]19
COUNTY									
Banner	5	(NA)	(NA)	[5]10	([5])	(NA)	(NA)	(NA)	(NA)
Buffalo	7	225	66	15	25	49	40	80	23
Cass (mineral industries only), total	13	2,783	1,746	214	23	536	921	133	152
Crushed and broken stone (mineral industries only)	10	2,056	1,240	166	18	375	698	92	131
Sand and gravel	3	727	506	48	5	161	223	41	21
Cedar	4	190	162	17	...	24	59	...	31
Cheyenne	4	(NA)	(NA)	[5]162	([5])	(NA)	(NA)	(NA)	(NA)
Colfax	5	139	115	13	...	28	33	...	7
Dawson	6	195	127	17	11	38	49	31	18
Dodge	6	834	616	55	3	163	246	14	96
Douglas (Sand and gravel only)	6	980	632	73	...	219	352	...	43
Gage	6	306	234	26	2	44	67	2	35
Hall	5	201	189	6	12	13	21	34	2
Jefferson (including operations in manufactures)	5	196	147	[5]21	([5])	44	[5]49	([5])	7
Keith	4	112	96	11	...	20	32	...	24
Kimball	26	(NA)	(NA)	[5]83	([5])	(NA)	(NA)	(NA)	(NA)
Lancaster (including operations in manufactures)	3	177	154	[5]15	([5])	30	[5]47	([5])	91
Lincoln	3	102	71	13	1	30	36	1	7
Richardson	14	(NA)	(NA)	[5]24	([5])	(NA)	(NA)	(NA)	(NA)
Saunders	4	(NA)	(NA)	[5]37	([5])	(NA)	(NA)	(NA)	(NA)
Scotts Bluff	5	(NA)	(NA)	[5]25	([5])	(NA)	(NA)	(NA)	(NA)
Thayer	4	170	142	17	...	41	55	...	46

D Withheld to avoid approximately disclosing figures of individual companies.
NA Not available.
[1]See table 1, footnote 6.
[2]See table 1, footnote 10.
[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[4]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for such companies is included with the county data for the Crude petroleum and Natural gas industries.
[5]Figures for "All other employees" are included with those for "Production and development workers."

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Nebraska, total	Adams	Antelope	Banner	Boone	Boyd	Brown	Buffalo	Butler	Cass	Cedar
All operations, total	259	3	1	5	2	1	3	7	2	16	4
Classified in mineral industries	249	2	1	5	2	1	3	7	2	13	4
Included in manufactures	10	1	...	...	...	...	...	...	...	3	...
Crude petroleum and natural gas extraction:											
Crude petroleum and natural gas[1]	66	...	...	5	...	...	...	...	...	...	...
Natural gas liquids	1	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	24	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:											
Crushed and broken limestone:											
Classified in mineral industries	23	...	...	...	...	...	...	...	...	10	...
Included in manufactures	2	...	...	...	...	...	...	...	...	1	...
Sand and gravel	32	2	1	...	2	1	3	7	2	3	4
Clay, ceramic, and refractory minerals:											
Fire clay (included in manufactures)	1	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:											
Classified in mineral industries	1	...	...	...	...	...	...	...	...	...	...
Included in manufactures	7	1	...	...	...	...	...	...	...	2	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	1	...	...	...	...	...	...	...	...	...	...

Industry	Cheyenne	Clay	Colfax	Cuming	Custer	Dakota	Dawson	Deuel	Dixon	Dodge	Douglas
All operations, total	4	1	5	2	2	2	6	1	1	6	8
Classified in mineral industries	4	1	5	2	2	2	6	1	1	6	7
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1
Crude petroleum and natural gas extraction:											
Crude petroleum and natural gas[1]	3	...	...	...	...	...	...	1	...	...	1
Natural gas liquids	1	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:											
Crushed and broken limestone:											
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	...	1	5	2	1	2	6	...	1	6	6
Clay, ceramic, and refractory minerals:											
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:											
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	1
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	1	...	...	...	...	...	...

Industry	Dundy	Fillmore	Franklin	Furnas	Gage	Greeley	Hall	Hamilton	Harlan	Hayes	Hitchcock
All operations, total	1	1	3	2	6	1	5	2	1	1	3
Classified in mineral industries	1	1	3	2	6	1	5	2	1	1	3
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:											
Crude petroleum and natural gas[1]	...	...	...	...	...	...	...	...	...	...	...
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:											
Crushed and broken limestone:											
Classified in mineral industries	...	...	...	...	3	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	1	1	3	2	3	1	5	2	1	1	3
Clay, ceramic, and refractory minerals:											
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:											
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954--Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Holt	Howard	Jefferson	Keith	Kimball	Knox	Lancaster	Lincoln	Loup	Madison	Merrick
All operations, total	3	1	5	4	26	2	3	3	2	2	2
Classified in mineral industries	3	1	4	4	26	2	2	3	2	2	2
Included in manufactures	...	...	1	...	...	...	1	...	...	...	...
Crude petroleum and natural gas extraction:											
Crude petroleum and natural gas[1]	...	...	...	...	26	...	...	...	...	...	...
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:											
Crushed and broken limestone:											
Classified in mineral industries	...	...	...	...	...	...	1	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	3	1	4	3	...	2	...	3	2	2	2
Clay, ceramic, and refractory minerals:											
Fire clay (included in manufactures)	...	...	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:											
Classified in mineral industries	...	...	...	...	...	...	1	...	...	...	...
Included in manufactures	...	...	...	...	...	...	1	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	1	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...

Industry	Morrill	Nance	Nemaha	Nuckolls	Otoe	Pawnee	Perkins	Pierce	Platte	Polk	Red Willow
All operations, total	3	1	3	4	1	1	2	3	2	1	3
Classified in mineral industries	3	1	3	2	...	1	2	3	2	1	3
Included in manufactures	...	...	...	2	1	...	...	...	...	...	...
Crude petroleum and natural gas extraction:											
Crude petroleum and natural gas[1]	1	...	...	...	...	...	...	...	...	...	...
Natural gas liquids	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:											
Crushed and broken limestone:											
Classified in mineral industries	...	...	3	...	...	1	...	...	...	...	...
Included in manufactures	...	...	...	1	...	...	...	...	...	...	...
Sand and gravel	2	1	...	2	...	...	2	3	2	1	3
Clay, ceramic, and refractory minerals:											
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:											
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	1	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...

Industry	Richardson	Saline	Sarpy	Saunders	Scotts Bluff	Seward	Sheridan	Stanton	Thayer	Valley
All operations, total	14	2	4	4	5	1	1	3	4	1
Classified in mineral industries	14	2	4	4	5	1	1	3	4	1
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[1]	12	...	...	1	3	...	1	1	...	...
Natural gas liquids	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Crushed and broken limestone:										
Classified in mineral industries	2	...	1	...	...	1	...	...	1	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Sand and gravel	...	2	3	3	2	...	...	2	3	1
Clay, ceramic, and refractory minerals:										
Fire clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Nebraska, all mineral operations:												
Including operations classified in manufactures	259	39	123	47	28	20	1	1	...	...	...	...
Mineral industries only	249	39	117	44	28	20	...	1	...	...	...	...
Crude petroleum and natural gas extraction, total	91	24	36	12	11	7	...	1	...	...	...	...
Crude petroleum and natural gas	56	24	27	6	8	...	...	1	...	...	...	...
Natural gas liquids	1	...	...	...	...	1	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	13	...	3	3	3	4	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	11	...	6	3	...	2	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	168	15	87	35	17	13	1	...	...	...	...	...
Mineral industries only	158	15	81	32	17	13	...	...	...	...	...	...
Crushed and broken limestone:												
Classified in mineral industries	23	1	6	5	6	5	...	...	...	...	...	...
Included in manufactures	2	...	...	1	...	...	1	...	...	...	...	...
Sand and gravel	132	13	74	26	11	8	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	7	...	5	2	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	1	...	...	...	...	...	...	...	...
Pumice and pumicite	1	1	...	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

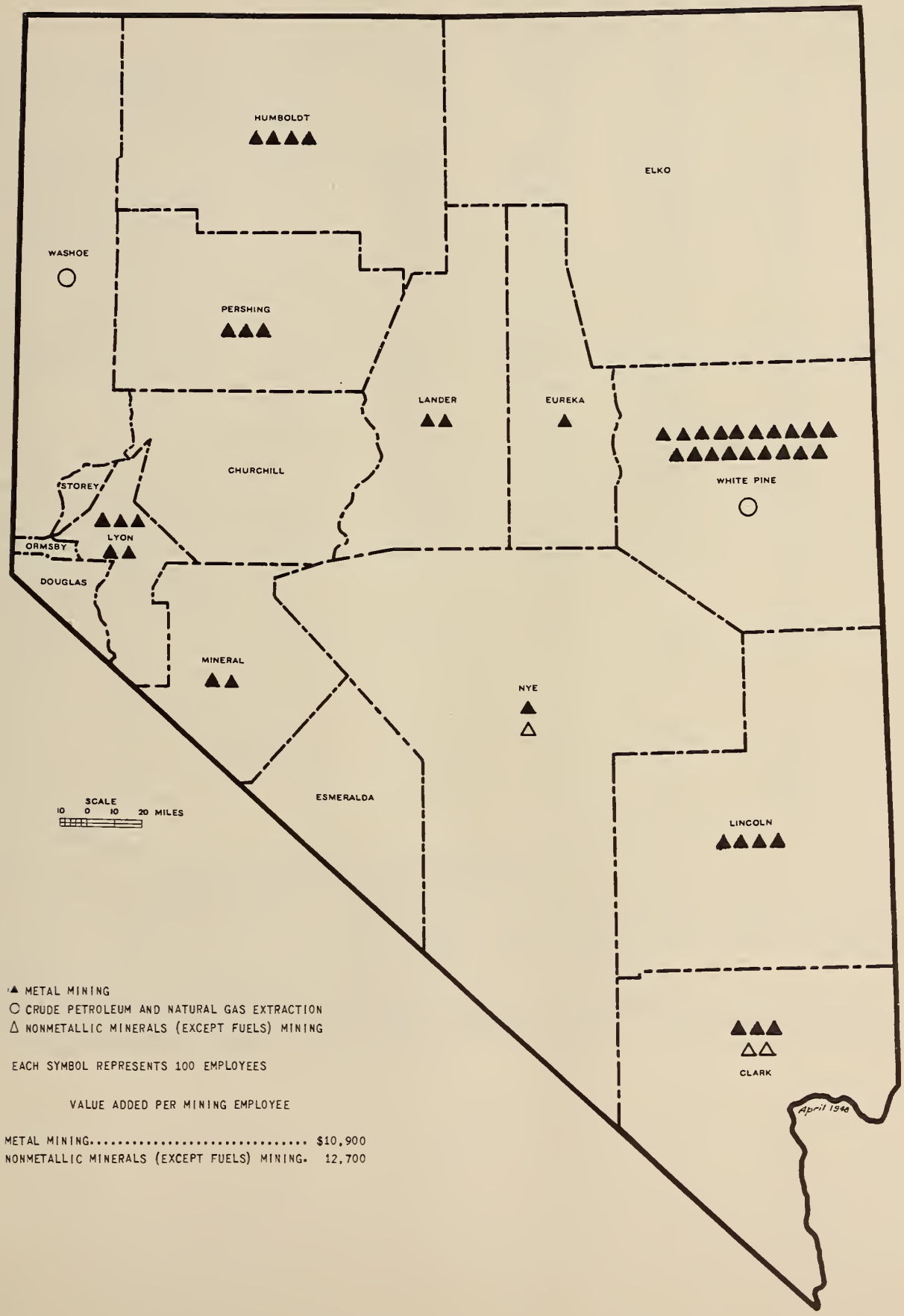
Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[2]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Nebraska, total	1,433	29,222	2,765	1.93	95	2,733	124	...	4,591	1	72	6	21
Crude petroleum and natural gas extraction, total	544	[3]22,077	233	0.43	11	211	xxx	xxx	866	12	69	16	3
Crude petroleum and natural gas	257	18,551	178	0.69	10	206	xxx	xxx	178	3	90	6	[4]1
Drilling oil and gas wells contract services	194	2,667	31	0.16	12	...	xxx	xxx	31	71	...	10	[4]19
Natural gas liquids and Oil and gas field contract services, n.e.c	93	([3])	24	0.26	(NA)	5	xxx	xxx	657	...	...	100	...
Nonmetallic minerals (except fuels) mining, total	889	7,145	2,532	2.85	354	2,522	124	...	3,725	...	72	5	23
Sand and gravel	610	4,803	2,523	4.14	525	2,522	124	...	3,716	...	72	5	[4]23
Other industries	279	2,342	9	0.03	4	...	...	...	9	...	100	...	...

NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For computations of water intake per production worker, including mine water used, see table 2.
[3]See table 2, footnote 4.
[4]Represents "not specified."

NEVADA

MINING IN NEVADA: 1954

Rank among States:
Employment, 27
Value of shipments, 26



VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$10,900
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	12,700

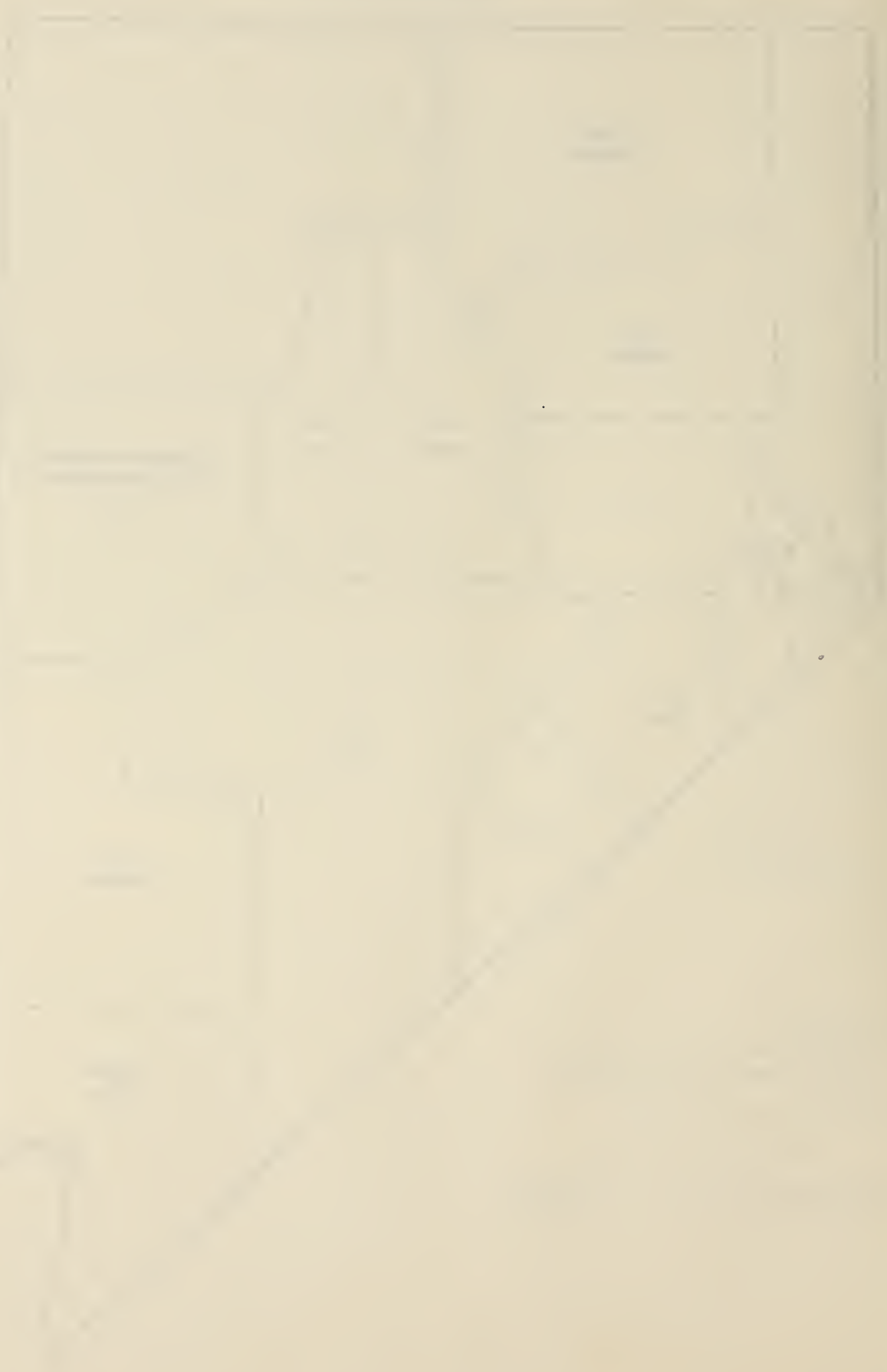


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes common clay and shale and contract service operations)

Item	1954	1939	1929	1919[1]	1909[1]	1902[2]
Number of operating companies	409	277	(NA)	(NA)	[3]548	[3]203
Number of establishments	454	(NA)	181	321	548	(NA)
Number of mines and quarries	424	285	184	325	1,021	196
Number of oil and gas wells producing at end of year	1	...	(NA)	...	...	...
Number of preparation plants	151	90	(NA)	(NA)	(NA)	(NA)
Value of shipments[4]...$1,000	[5]104,071	25,564	26,659	18,054	23,272	3,518
Value added in mining...do	[5]54,795	18,670	18,804	9,432	15,729	2,406
Number of persons engaged, total	5,829	5,820	5,871	5,798	7,229	1,994
Production and development workers	4,659	5,099	5,246	4,916	5,840	[6]1,706
All other employees	677	559	[7]570	721	784	288
Proprietors and firm members	493	162	55	161	605	(NA)
Performing manual labor	404	128	(NA)	122	221	(NA)
Man-hours worked by production and development workers...1,000	10,378	11,344	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	80,909	16,112	18,330	18,557	16,078	3,377
Wages of production and development workers...do	21,894	7,880	8,936	8,503	7,335	1,862
Salaries of all other employees...do	3,902	1,338	[7]1,539	1,432	1,200	403
Minerals received for preparation...do	14,766	(NA)	(NA)	...	1,610	(NA)
Supplies...do	22,070	4,188	5,832	6,355	4,175	1,077
Fuel[8]...do	2,252	650	1,071	1,171	1,441	
Purchased electric energy...do	2,005	1,190	592	741		
Contract work...do	14,020	866	360	355	317	35
Purchased machinery installed...do	4,410		2,106	(NA)		
Capital expenditures, total...do	10,262	(NA)	(NA)	(NA)		
Development and exploration of mineral property...do	5,741		4,552	5,179	(NA)	(NA)
Preparation plant construction...do	856	837				
Other construction...do	365					
New machinery and equipment...do	2,602	1,252	(NA)	(NA)		
Used plant and equipment...do	698	226				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	354	106	80	60	32	5
Per production worker	77	21	15	12	5	3
Prime movers...1,000	217	39	48	21	18	5
Electric motors driven by purchased energy...do	137	67	32	39	14	([9])
Horsepower rating of electric motors driven by energy generated at establishment...do	39	4	26	10	4	1
Energy used...million kwh equivalent	929	455	1,035	(NA)		
Coal...1,000 short tons	2	27	115	114		
Fuel oils...1,000 barrels	325	49	59	67	(NA)	(NA)
Gas[10]...million cu.ft	2	...	...	...		
Electric energy purchased...million kwh	214	125	43	(NA)		
Electric energy generated and used...do	37	6	78	(NA)		

NA Not available.

[1]Excludes data for sand and gravel operations and stone quarries operated as part of lime plants.

[2]May include data for one lime plant producing lime valued at less than $73,000.

[3]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[4]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[5]Excludes data for the Uranium-radium-vanadium ores industry.

[6]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[7]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[8]For 1954, represents purchased fuels only. For 1939, includes the value of fuels produced and used at the same establishments for power or heat.

[9]Less than one-half of the unit of measure specified.

[10]Includes data for gas produced and used at the same establishment.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Nevada, total		Metal mining							
		Including operations classified in manufactures	Mineral industries only	Total	Iron ores	Copper ores	Lead and zinc ores	Lode gold	Placer gold	Silver ores	Manganese ores
1	Number of operating companies	409	408	322	6	21	31	28	9	19	17
2	Number of establishments	454	450	353	7	27	37	29	9	19	17
	Number of mines, quarries, and producing oil and gas wells:										
3	1954	425	421	341	7	25	36	28	9	19	16
4	1939	285	(NA)	245	...	5	6	143	16	47	...
5	Number of preparation plants	151	151	103	...	4	4	16	9	5	2
	Value of shipments:[2]										
6	1954 ..... $1,000	104,071	102,471	[3]90,879	2,025	42,073	1,156	866	603	119	8,439
7	1939 ..... do	25,564	(NA)	[4]24,517	...	11,323	[5]310	8,136	996	1,973	...
8	Value added in mining ..... do	[3]54,795	[3]53,429	[3]49,002	998	15,712	1,018	546	241	205	4,220
9	Number of persons engaged, total	5,829	5,755	4,919	128	1,538	276	115	55	69	356
10	Production and development workers	4,659	4,585	3,943	78	1,295	205	66	44	47	229
11	All other employees	677	677	562	44	217	41	15	3	7	102
12	Proprietors and firm members	493	493	414	6	26	30	34	8	15	25
13	Performing manual labor	404	404	360	2	19	28	28	7	13	24
	Man-hours worked by production and development workers:										
14	1954 1,000	10,378	10,232	8,807	186	2,557	380	157	117	97	502
15	1939 ..... do	11,344	(NA)	[4]10,870	...	4,429	[5]513	[9]3,605	293	1,192	...
	At mines:										
16	Underground ..... do	2,112	2,108	2,020	...	90	201	11	...	65	42
17	Open-pit ..... do	3,673	3,531	2,873	183	630	4	[10]90	99	2	7
18	Surface (mine shops, yards, etc.) ..... do	1,702	1,702	1,697	3	741	112	...	15	8	4
19	At preparation plants ..... do	2,602	2,602	2,217	...	1,096	63	56	3	22	449
20	At oil and gas field operations	289	289	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
21	Man-hours spent on development and exploration work (included above) ..... do	1,237	1,237	941	1	417	117	16	6	60	10
22	Principal expenses designated below, total $1,000	80,909	80,387	68,769	1,400	35,870	1,828	582	569	324	5,938
23	Wages of production and development workers ..... do	21,894	21,606	18,685	431	5,354	808	245	190	184	1,081
24	Salaries of all other employees ..... do	3,902	3,902	3,200	263	1,184	259	65	19	32	606
25	Minerals received for preparation ..... do	14,766	14,766	[32,653	...	19,338	420	...	...	...	3,259
26	Supplies ..... do	[11]22,070	21,836	[32,653	318	19,338	420	163	203	51	3,259
	Purchased fuel:										
27	Coal ..... do	[11]13	13	8	...	5	...	...	...	...	...
28	Fuel oil ..... do	[11]1,651	1,651	1,382	68	205	23	55	154	10	155
29	Gas ..... do	(14)	(14)	(14)	...	...	...	...	...	...	(14)
30	Other fuels ..... do	[11]588	588	401	25	76	16	15	3	9	13
31	Purchased electric energy ..... do	[11]2,005	2,005	1,887	...	1,315	100	1	...	1	161
32	Contract work ..... do	[11]14,020	14,020	10,553	295	8,393	202	38	...	37	663
33	Purchased machinery installed ..... do	[12]4,410	4,410	3,356	380	464	91	134	31	21	94
34	Capital expenditures, total ..... do	[12]10,262	10,262	8,378	59	3,435	714	86	29	215	126
35	Development and exploration of mineral property ..... do	[12]5,741	5,741	4,698	5	2,601	591	34	3	173	39
36	Preparation plant construction ..... do	[12]856	856	786	...	331	5	17	1	35	...
37	Other construction ..... do	[12]365	365	344	...	39	28	4	2	...	3
38	New machinery and equipment ..... do	[12]2,602	2,602	1,968	50	459	77	13	23	3	81
39	Used plant and equipment ..... do	[12]698	698	582	4	5	13	18	...	4	3
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[12]354	354	295	5	127	39	6	7	4	10
41	Per production worker	77	77	75	64	98	190	[13]	159	85	44
42	Prime movers 1,000	[12]217	217	166	5	42	24	5	7	3	4
43	Electric motors driven by purchased energy ..... do	[12]137	137	129	(14)	85	15	1	...	1	6
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	[12]26	26	26	(14)	...	13	1	3	(14)	...
45	Energy used ..... million kwh equivalent	[12]929	929	765	23	209	29	22	65	6	119
	Produced and used for fuel:										
46	Natural gas ..... Million cu. ft	2	2	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Purchased fuel:										
47	Coal ..... 1,000 short tons	[12]2	2	1	...	1	...	...	...	...	...
48	Fuel oil ..... 1,000 barrels	[12]325	325	264	10	32	4	11	38	2	45
49	Gas ..... million cu.ft	(14)	(14)	(14)	...	...	...	...	...	...	(14)
50	Electric energy purchased ..... million kwh	[12]214	214	206	...	128	18	(14)	(14)	(14)	37
51	Electric energy generated and used ..... do	[12]37	37	37	(14)	...	2	4	9	...	...
52	Water intake, including mine water used ..... million gallons	[12]8,001	8,001	7,213	...	4,079	284	168	688	6	772
53	Per production worker ..... do	1.74	1.74	1.83	...	3.15	1.39	[13]	15.64	0.13	3.37

NA Not available.
xxx Not applicable.
[1]Includes 2 molybdenum ores mines.
[2]See table 1, footnote 4.
[3]See table 1, footnote 5.
[4]Figures for Nonmetallic minerals (except fuels) contract services are included with those for Metal mining contract services.
[5]Figures for 1 antimony ores mine are included with those for lead and zinc ores.
[6]Figures for 2 crushed and broken stone quarries, 3 clay mines, and 3 mines in the chemical and fertilizer mineral mining industries are included with those for mines in the Miscellaneous nonmetallic minerals (except fuels) industries.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Metal mining—Continued				Nonmetallic minerals (except fuels) mining									
				Total									
Tungsten ores	Uranium-radium-vanadium ores	Metal mining contract services, Mercury ores, and Antimony ores	Crude petroleum and natural gas extraction	Including operations classified in manufactures	Mineral industries only	Dimension stone	Crushed and broken stone (including operations classified in manufactures)	Common sand and gravel	Glass sand and Foundry sand	Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Natural abrasives, except sand, Chemical and fertilizer mineral mining, and Nonmetallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels) (including operations classified in manufactures)	
157	6	33	15	78	76	6	8	10	4	5	20	25	1
168	7	33	16	85	81	6	9	13	4	5	21	27	2
165	7	29	1	83	79	6	9	13	4	5	18	28	3
11	...	[1]17	...	40	(NA)	...	2	2	20	9	7	10	4
39	...	24		48	48	...	6	13	4	...	10	15	5
20,375	(NA)	15,223	476	12,716	11,116	168	1,749	2,780	683	872	1,789	4,675	6
1,307	...	[4] [5]472	...	[4]1,047	(NA)	...	([6])	[7]59	[7]83	[6]76	[4] [6]61	[6]768	7
15,494	(NA)	10,568	([8])	8,882	7,516	129	1,369	1,458	532	748	1,137	3,509	8
1,338	19	1,025	171	739	665	31	126	146	50	50	114	222	9
1,024	16	939	124	592	518	27	116	101	45	47	82	174	10
99	...	34	41	74	74	...	9	32	3	1	6	23	11
215	3	52	6	73	73	4	1	13	2	2	26	25	12
192	...	47	...	44	44	4	...	4	1	...	20	15	13
2,528	28	2,255	289	1,282	1,136	53	244	215	93	108	188	381	14
[9]565	...	[9]273	...	[4]474	(NA)	...	([6])	[7]31	[7]40	[6]26	[4] [6]22	[6]355	15
1,469	28	114	xxx	92	88	...	...	...	...	7	78	7	16
241	...	1,617	xxx	800	658	53	212	[10]127	55	100	72	181	17
[illegible]	...	497	xxx	5	5	...	...	(NA)	(NA)	1	2	2	18
[illegible]	...	27	xxx	385	385	...	32	88	38	...	36	191	19
xxx	xxx	xxx	289	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
261	28	25	289	7	7	2		...	...		1	4	21
12,200	103	9,955	5,051	7,089	6,567	119	913	2,128	375	355	1,086	2,113	22
5,432	64	4,896	529	2,680	2,392	77	500	514	198	228	371	792	23
563	...	209	193	509	509	...	33	264	26	3	42	141	24
{ 1,792	...		xxx	} [11]2,797	2,563	{ ...		(NA)	(NA)	...	} 205	{ ...	25
{ 2,830	15	4,264	1,386			{ 32	[11]342	1,203	82	[11]84		{ [11]849	26
1	...	2	...	[11]5	5	...	...	...	...	...	5	...	27
264	3	445	5	[11]264	264	2	[11]17	68	24	[11]21	25	[11]107	28
...	...	...	...	...	...	...	...	...	...	...	...	...	29
141	2	101	47	[11]140	140	5	[11]8	49	7	[11]5	17	[11]49	30
280	...	29	...	[11]118	118	3	[11]9	14	13	[11]9	15	[11]55	31
897	19	9	2,891	[11]576	576	...	[11]4	16	25	[11]5	406	[11]120	32
1,426	14	701	326	[12]728	728	3	[12]54	238	14	[12]10	81	[12]328	33
2,750	68	896	1,090	[12]794	794	6	[12]54	266	14	[12]10	102	[12]342	34
1,145	57	50	987	[12]56	56	3	...	36	...	...	8	[12]9	35
376	...	21	...	[12]70	70	...	...	16	...	...	9	[12]45	36
159	...	109	1	[12]20	20	...	...	4	10	...	6	...	37
751	...	511	78	[12]556	556	...	[12]54	142	2	[12]10	67	[12]281	38
319	11	205	24	[12]92	92	3	...	68	2	...	12	7	39
60	1	36	10	[12]49	49	1	[12]8	12	2	[12]6	6	[12]14	40
59	63	38	81	xxx	95	37	xxx	119	44	128	73	80	41
40	1	35	10	[12]41	41	1	[12]6	11	1	[12]6	6	[12]10	42
20	...	1	([14])	[12]8	8	...	[12]2	1	1	...	([13])	[12]4	43
6	...	3	...	([14])	([14])			([14])	...	...	([13])	...	44
140	2	150	14	[12]150	150	1	[12]7	34	12	[12]8	20	[12]68	45
xxx	xxx	xxx	2	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
([14])	...	([14])	...	[12]1	1	...	...	...	...	...	1	...	47
49	1	72	1	[12]60	60	([14])	[12]3	13	6	[12]4	4	[12]30	48
...	...	...	...	...	...	...	...	...	...	...	...	...	49
21	...	2	...	[12]8	8	([14])	([14])	1	1	[12]1	1	[12]4	50
16	...	6	...	([14])	([14])	...	...	...	...	...	([14])	([14])	51
1,211	...	5	3	[12]785	785	...	[12]1	411	56	[12]101	40	[12]176	52
1.18	...	0.01	0.02	1.33	1.52	...	0.01	4.07	1.24	2.15	0.49	1.01	53

[7]Figures for Foundry sand are included with those for Common sand and gravel.

[8]Not shown since the cost of minerals received for preparation, supplies, fuel, purchased electric energy, and contract work exceeds the value of shipments plus capital expenditures.

[9]Figures for the following nonproducing mines are included with those for Mercury ores: 1 lode gold mine, 1 tungsten ores mine, and 1 molybdenum ores mines.

[10]Includes man-hours worked on floating equipment.

[11]Figures for fuels, electric energy, and contract work for crushed stone, clay, and gypsum operations classified in manufactures are included with figures for supplies.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Nevada, all mineral operations:									
Including operations in manufactures	454	[2]104,071	[2]54,795	4,659	677	10,378	21,894	3,902	[3]9,564
Mineral industries only	450	[2]102,471	[2]53,429	4,585	677	10,232	21,606	3,902	9,564
Metal mining, total	353	[2]90,879	[2]49,002	3,943	562	8,807	18,685	3,200	7,796
Iron ores	7	2,025	998	78	44	186	431	263	55
Copper ores	27	42,073	15,712	1,295	217	2,557	5,354	1,184	3,430
Lead and zinc ores	37	1,156	1,018	205	41	380	808	259	701
Gold and silver ores	57	1,588	992	157	25	371	619	116	308
Other metal mining	225	[2]44,037	[2]30,297	2,208	235	5,313	11,473	1,378	3,302
Crude petroleum and natural gas extraction[4]	16	476	([6])	124	41	289	529	193	1,066
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	85	12,716	8,882	592	74	1,282	2,680	509	[3]702
Mineral industries only	81	11,116	7,516	518	74	1,136	2,392	509	702
Dimension stone (including operations in manufactures)	6	168	129	27	...	53	77	...	3
Crushed and broken stone (including operations in manufactures)	9	1,749	1,369	116	9	244	500	33	[3]54
Sand and gravel	17	3,463	1,990	146	35	308	712	290	210
Clay, ceramic, and refractory minerals (including operations in manufactures)	5	872	748	47	1	108	228	3	[3]10
Natural abrasives, except sand, Chemical and fertilizer mineral mining, and Nonmetallic minerals (except fuels) contract services	21	1,789	1,137	82	6	188	371	42	90
Miscellaneous nonmetallic minerals (except fuels) (including operations in manufactures)	27	4,675	3,509	174	23	381	792	141	[3]335
COUNTY									
Clark (mineral industries only)	32	[2]13,622	[2]7,576	443	144	948	2,099	930	503
Sand and gravel	12	3,013	1,647	113	32	218	544	245	163
Douglas	8	259	173	11	...	29	58	...	8
Elko	36	[2]821	[2]435	47	5	82	174	5	73
Esmeralda	21	[2]596	[2]329	52	4	102	234	36	65
Eureka	7	[2]271	[2]499	69	6	152	321	51	453
Humboldt	29	[2]7,856	[2]4,720	371	47	910	1,742	283	433
Lander	30	1,721	1,446	167	16	372	633	93	748
Lincoln	21	4,226	3,259	347	38	777	1,870	234	650
Lyon	13	(D)	(D)	470	68	(D)	(D)	(D)	(D)
Mineral	38	[2]3,938	[2]3,247	201	33	484	967	216	180
Nye	61	[5]3,952	[5]3,120	161	8	[5]358	[5]809	[5]55	[5]239
Metal mining	47	2,760	2,124	84	7	181	457	52	201
Ferro-alloy ores, except vanadium	27	2,650	1,993	72	5	153	403	47	115
Pershing, total	44	5,887	4,472	311	19	771	1,657	165	465
Metal mining	41	5,747	4,407	307	19	761	1,637	165	461
Nonmetallic minerals (except fuels) mining	3	140	65	4	...	10	20	...	4
Storey	4	(D)	(D)	40	10	(D)	(D)	(D)	(D)
Washoe (mineral industries only)	14	[5]636	[5]448	42	8	[5]103	[5]207	[5]52	[5]99
White Pine (mineral industries only)	59	48,709	24,719	1,745	177	3,753	8,106	948	3,903
Ferro-alloy ores, except vanadium	36	829	683	51	8	124	217	38	255

D Withheld to avoid approximately disclosing figures for individual companies. [1]See table 1, footnote 4. [2]See table 1, footnote 5. [3]See table 2, footnote 12. [4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries. [5]Excludes data for one Crude petroleum or Natural gas establishment. [6]See table 2, footnote 8.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nevada, total	Churchill	Clark	Douglas	Elko	Esmeralda	Eureka	Humboldt	Lander
All mineral operations, total	454	18	33	8	36	21	7	29	30
Classified in mineral industries	450	18	32	8	36	21	7	29	30
Included in manufactures	4	...	1	...	...	...	...	...	...
Metal mining:									
Iron ores	7	1	...	1	...	...	...	1	...
Copper ores	27	...	2	...	3	1	...	1	9
Lead and zinc ores:									
Valued chiefly for lead	35	2	2	...	7	...	2	...	2
Valued chiefly for zinc	2	...	...	...	...	...	...	...	...
Gold and silver ores:									
Lode gold	29	1	...	...	1	1	...	...	3
Placer gold	9	...	...	...	1	...	1	1	1
Silver ores	19	2	1	...	2	1	1	1	...
Ferro-alloy ores, except vanadium:									
Manganese ores	17	...	2	...	2	1	1	2	2
Tungsten ores	168	7	1	7	13	4	...	12	4
Metal mining contract services	4	...	...	...	...	...	...	...	1
Miscellaneous metal ores:									
Mercury ores	27	...	1	...	2	1	...	8	1
Uranium-radium-vanadium ores	7	...	1	...	1	2	1	1	...
Metallic ores, n.e.c.	2	...	...	...	...	...	...	...	1
Crude petroleum and natural gas extraction:[1]									
Crude petroleum and natural gas	14	...	...	...	...	...	...	...	...
Oil and gas field contract services	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:									
Dimension stone:									
Marble	2	...	1	...	...	...	...	...	...
Trap rock	1	...	1	...	...	...	...	...	...
Sandstone	3	...	3	...	...	...	...	...	...
Crushed and broken stone:									
Limestone:									
Classified in mineral industries	3	...	1	...	...	...	...	...	...
Included in manufactures	2	...	1	...	...	...	...	...	...
Granite	1	...	...	...	...	...	...	...	...
Trap rock	1	...	...	...	...	...	...	...	...
Stone, n.e.c.	2	...	...	...	1	...	1	...	...
Sand and gravel:									
Common sand and gravel	13	...	8	...	1	...	...	1	...
Glass sand	2	...	2	...	...	...	...	...	...
Foundry sand	2	...	2	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:									
Bentonite	1	...	...	...	...	...	...	...	...
Fire clay	1	...	...	...	...	...	...	...	...
Magnesite and brucite	2	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	1	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	1	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:									
Barite	7	...	...	...	1	...	...	...	5
Fluorspar	9	2	...	...	...	...	...	...	...
Rock salt	1	1	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	3	...	...	...	1	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):									
Gypsum:									
Classified in mineral industries	2	...	2	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...
Pumice and pumicite	3	1	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	9	...	...	...	...	9	...	...	...
Nonmetallic minerals, n.e.c.	12	1	2	...	...	1	...	1	1

See footnotes at end of table.

Table 4.--NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954--Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Lincoln	Lyon	Mineral	Nye	Ormsby	Pershing	Story	Washoe	White Pine
All mineral operations, total	21	13	38	61	2	44	4	16	60
Classified in mineral industries	21	13	38	61	2	44	4	14	59
Included in manufactures	...	...	...	...	...	...	...	2	1
Metal mining:									
Iron ores	...	...	...	1	...	3	...	...	...
Copper ores	1	1	1	...	...	...	...	...	8
Lead and zinc ores:									
Valued chiefly for lead	6	...	4	1	...	...	...	1	8
Valued chiefly for zinc	2	...	...	...	...	...	...	...	...
Gold and silver ores:									
Lode gold	2	3	1	7	1	2	3	4	...
Placer gold	...	1	1	1	...	2	...	...	...
Silver ores	2	...	3	3	...	...	...	...	3
Ferro-alloy ores, except vanadium:									
Manganese ores	2	...	...	...	...	...	...	...	5
Tungsten ores	3	7	20	27	...	29	...	3	31
Metal mining contract services	...	...	1	...	...	...	...	...	2
Miscellaneous metal ores:									
Mercury ores	...	...	3	6	...	5	...	...	...
Uranium-radium-vanadium ores	...	...	1	...	...	...	...	...	...
Metallic ores, n.e.c.	...	...	...	1	...	...	...	...	...
Crude petroleum and natural gas extraction:[1]									
Crude petroleum and natural gas	...	...	...	1	...	...	...	1	1
Oil and gas field contract services	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:									
Dimension stone:									
Marble	...	...	1	...	...	...	...	...	...
Trap rock	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...
Crushed and broken stone:									
Limestone:									
Classified in mineral industries	...	...	...	...	...	...	...	2	...
Included in manufactures	...	...	...	...	...	...	...	...	1
Granite	...	...	...	...	...	...	...	1	...
Trap rock	...	...	...	...	...	...	...	1	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...
Sand and gravel:									
Common sand and gravel	...	...	...	1	1	...	...	1	...
Glass sand	...	...	...	...	...	...	...	...	...
Foundry sand	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:									
Bentonite	...	...	...	1	...	...	...	...	...
Fire clay	...	...	...	...	...	...	...	...	1
Magnesite and brucite	...	...	...	2	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	...	...	...	...	...	...	...	1	...
Natural abrasives, except sand, n.e.c.	...	...	...	1	...	...	...	...	...
Chemical and fertilizer mineral mining:									
Barite	...	...	...	1	...	...	...	...	...
Fluorspar	...	...	1	5	...	1	...	...	...
Rock salt	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	1	...	1	...	...	...
Miscellaneous nonmetallic minerals (except fuels):									
Gypsum:									
Classified in mineral industries	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	1	...
Pumice and pumicite	...	...	1	1	...	...	...	...	...
Talc, soapstone, and pyrophyllite	...	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c.	3	1	...	...	...	1	1	...	...

NA Not available.
[1]See table 3, footnote 4.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Nevada, all mineral operations:												
Including operations classified in manufactures	454	244	119	26	22	25	7	7	2	2	...	...
Mineral industries only	450	244	118	26	21	23	7	7	2	2	...	...
Metal mining, total	353	212	86	16	12	10	6	7	2	2	...	...
Iron ores	7	...	3	1	1	2	...	...	...	...	...	...
Copper ores	27	14	4	2	1	2	1	...	2	1	...	...
Lead and zinc ores:												
Ores valued chiefly for lead	35	19	11	...	2	2	...	1	...	...	...	...
Ores valued chiefly for zinc	2	...	1	...	1	...	...	...	...	...	...	...
Gold and silver ores:												
Lode gold	29	20	8	...	...	...	1	...	...	...	...	...
Placer gold	9	4	4	...	...	1	...	...	...	...	...	...
Silver ores	19	7	8	3	1	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Manganese ores	17	10	3	1	1	...	1	1	...	...	...	...
Tungsten ores	168	116	31	7	5	3	2	4	...	...	...	...
Metal mining contract services	4	...	2	...	...	...	...	1	...	1	...	...
Miscellaneous metal ores:												
Mercury ores	27	20	5	1	...	...	1	...	...	...	...	...
Uranium-radium-vanadium ores	7	1	5	1	...	...	...	...	...	...	...	...
Antimony ores	2	1	1	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	16	8	4	...	1	3	...	...	...	...	...	...
Crude petroleum and natural gas	14	8	3	...	1	2	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	2	...	1	...	...	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	85	24	29	10	9	12	1	...	...	...	...	...
Mineral industries only	81	24	28	10	8	10	1	...	...	...	...	...
Dimension stone:												
Marble	2	...	2	...	...	...	...	...	...	...	...	...
Trap rock	1	...	...	...	1	...	...	...	...	...	...	...
Sandstone	3	...	2	1	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	3	...	1	1	...	1	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	2	...	...	...	...	...	...
Granite	1	...	1	...	...	...	...	...	...	...	...	...
Trap rock	1	...	...	1	...	...	...	...	...	...	...	...
Stone, n.e.c	2	...	1	...	1	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	13	1	5	3	2	1	1	...	...	...	...	...
Glass sand	2	...	...	...	...	2	...	...	...	...	...	...
Foundry sand	2	1	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	1	...	1	...	...	...	...	...	...	...	...	...
Fire clay	1	1	...	...	...	...	...	...	...	...	...	...
Magnesite and brucite	2	...	...	...	1	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (classified in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Barite	7	3	2	2	...	...	...	...	...	...	...	...
Fluorspar	9	7	...	1	...	1	...	...	...	...	...	...
Rock salt	1	1	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	3	...	1	1	1	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum:												
Classified in mineral industries	2	...	...	...	1	1	...	...	...	...	...	...
Included in manufactures	1	...	...	...	1	...	...	...	...	...	...	...
Pumice and pumicite	3	2	1	...	...	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	9	6	3	...	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c	12	2	6	...	1	3	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Water intake (except mine water): Million gallons per production worker[1]	Water intake (except mine water): Gallons per dollar value added	Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons): Used	Mine water (mil. gallons): Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Nevada, total	4,585	[2]53,429	6,625	1.44	124	5,026	1,376	6,124	11,691	13	2	73	12
Metal mining, total	3,943	[2]49,002	5,987	1.52	122	4,403	1,226	5,501	10,801	14	1	73	12
Iron ores	78	998	...	...	...	...	...	...	...	...	...	...	...
Copper ores	1,295	15,712	3,183	2.46	203	3,183	896	2,409	6,864	1	...	99	...
Lead and zinc ores	205	1,018	34	0.17	33	29	250	560	284	59	38	3	...
Gold and silver ores:													
Lode gold	66	546	125	([3])	229	112	43	1	168	...	2	98	...
Placer gold	44	241	676	15.36	2,805	xxx	12	xxx	706	...	([4])	2	98
Silver ores	47	205	6	0.13	29	5	...	...	10	...	17	83	...
Ferro-alloy ores, except vanadium:													
Manganese ores	229	4,220	772	3.37	183	6	...	...	1,086	100	...	...	...
Tungsten ores	1,024	15,494	1,186	1.16	76	1,063	25	131	1,678	1	4	92	3
Uranium-radium-vanadium ores.	16	(NA)	...	...	(NA)	...	...	...	...	...	...	...	...
Metal mining contract services and Other metal ores	939	10,568	5	0.01	([4])	5	...	2,400	5	...	...	[5]100	...
Crude petroleum and natural gas extraction, total	124	([5])	3	0.02	([5])	...	xxx	xxx	[6]3	...	...	100	...
Crude petroleum and natural gas	75	([5])	3	0.04	([5])	...	xxx	xxx	[6]3	...	...	100	...
Oil and gas field contract services, n.e.c	49	385	...	...	...	...	xxx	xxx	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	518	7,516	635	1.23	84	623	150	623	887	1	6	73	20
Dimension stone	27	129	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:													
Common sand and gravel	101	1,458	411	4.07	282	410	...	...	485	...	...	74	[7]26
Glass sand and Foundry sand	45	532	56	1.24	105	45	...	...	84	...	...	61	39
Other industries	345	5,397	168	0.49	31	168	150	623	318	3	22	75	...

NA Not available.
xxx Not applicable.
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]See table 1, footnote 5.
[3]See table 2, footnote 13.
[4]Less than one-half of the unit of measure specified.
[5]See table 2, footnote 8.
[6]Represents water intake only.
[7]Represents "not specified."

NEW HAMPSHIRE

128-1

MINING IN NEW HAMPSHIRE: 1954

Rank among States:
Employment, 46
Value of shipments, 46

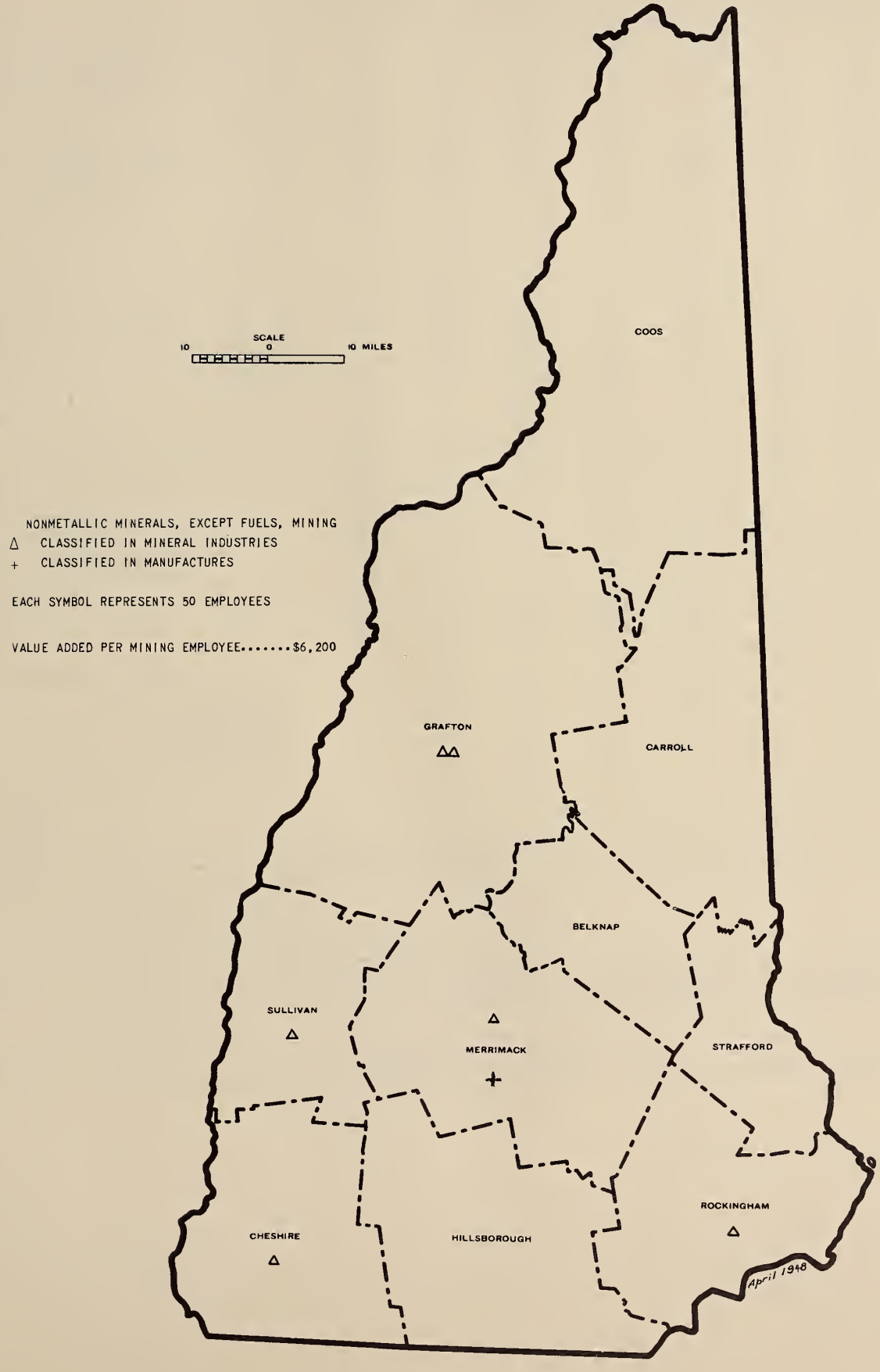




Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations					
	1954	1939[1]	1929[2]	1954	1939[1]	1929[3]	1919	1909	1902[4]
Number of operating companies	39	24	(NA)	26	17	(NA)	(NA)	[5]45	[5]62
Number of establishments	44	(NA)	36	31	(NA)	36	30	46	(NA)
Number of mines and quarries	44	25	39	30	17	39	33	53	56
Number of preparation plants	31	13	(NA)	22	8	(NA)	(NA)	(NA)	(NA)
Value of shipments[6]...$1,000	2,510	903	1,562	1,569	718	1,562	1,568	1,309	1,176
Value added in mining...do	1,914	777	1,269	1,054	647	1,269	1,323	1,145	1,042
Number of persons engaged, total	348	[1]316	643	242	[1]247	643	757	1,508	1,345
Production and development workers	285	[1]266	569	196	[1]205	569	682	1,418	[7]1,253
All other employees	34	[1]41	[8]55	22	[1]35	[8]55	45	48	92
Proprietors and firm members	29	[1]9	19	24	[1]7	19	30	42	
Performing manual labor	18	[1]5	(NA)	16	[1]5	(NA)	17	17	(NA)
Man-hours worked by production and development workers...1,000	574	[1]535		406	[1]408		(NA)	(NA)	
Principal expenses designated below, total...$1,000	1,789	[1]479	1,177	1,295	[1]339	1,177	1,167	1,144	1,009
Wages of production and development workers...do	918	[1]266	773	602	[1]197	773	826	926	806
Salaries of all other employees...do	190	[1]87	[8]111	145	[1]71	[8]111	96	54	69
Minerals received for preparation...do	51	(NA)	(NA)	51	(NA)	(NA)	...	...	(NA)
Supplies...do	[9]395	[1]63	190	[9]341	[1]35	190	145	101	
Purchased fuel...do	[9]99	[1]44	46	[9]54	[1]23	46	42	54	134
Purchased electric energy...do	[9]70	[1]19	51	[9]41	[1]13	51	23		
Contract work...do	[9]66	...	6	[9]61	...	6	35	9	...
Purchased machinery installed...do	[10]188		47	[10]46		47	(NA)		
Capital expenditures, total...do	[10]273	(NA)	(NA)	[10]79	(NA)	(NA)			
Development and exploration of mineral property...do	[10]37		9	[10]19		9	55	(NA)	(NA)
Preparation plant construction...do	[10]52	[1]2		[10]8	...				
Other construction...do	[10]22		(NA)	...	...	(NA)	(NA)		
New machinery and equipment...do	[10]156	[1]72		[10]48	[1]6				
Used plant and equipment...do	[10]6	[1]1		[10]4	[1]1				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	[10]15	[1]7	5	[10]7	[1]4	5	4	4	3
Per production worker	53	25	9	36	[1]20	10	6	3	2
Prime movers...1,000	[10]12	[1]5	2	[10]6	[1]3	2	3	3	3
Electric motors driven by purchased energy...do	[10]3	[1]2	3	[10]1	[1]1	3	1	1	...
Horsepower rating of electric motors driven by energy generated at establishment...do	...	...	...	...	...	...	...	...	...
Energy used...million kwh equivalent	[10]29	18	54	[10]15	14	54	(NA)		
Coal...1,000 short tons	...	[1]1	6	...	[1]1	6	5		
Fuel oils...1,000 barrels	[10]5	[1]1	2	[10]1	[1]1	2	...	(NA)	(NA)
Gas...million cu.ft	...	...	...	...	...	...	...		
Electric energy purchased...million kwh	[10]4	[1]1	[10]3	[10]3	[1]1	3	(NA)		
Electric energy generated and used...do	...	...	...	...	...	...			

NA Not available.

[1]Except for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing stone at such operations was $250,000; this value has been included in the value of shipments and value added in mining. Except for number of mines includes data for one diatomite mine in Massachusetts.

[2]Excludes data for common clay and shale operations. There were 3 such mines in 1939, with products valued at $11,000.

[3]Includes data for 4 sand and gravel establishments.

[4]Represents producing operations only. Excludes data for one nonproducing operation.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees, if any, at central offices not included in reports for mining and mineral preparation establishments.

[9]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[10]Excludes statistics for crushed stone and clay operations classified in manufactures.

Table 2.--DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION)

Item	New Hampshire, total		Sand and gravel	Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Mica	Other operations[1] (including operations classified in manufactures)
	Including operations classified in manufactures	Mineral industries only				
Number of operating companies	39	34	11	6	14	8
Number of establishments	44	39	11	8	17	8
Number of mines and quarries:						
1954	44	39	12	8	16	8
1939	25	(NA)	5	8	...	12
Number of preparation plants	31	28	9	4	13	5
Value of shipments:[2]						
1954, $1,000	2,510	1,980	926	833	218	533
1939, do	[3]903	(NA)	173	170	...	[3]560
Value added in mining, do	1,913	1,658	846	619	175	273
Number of persons engaged, total	348	292	104	112	66	66
Production and development workers	285	240	87	97	48	53
All other employees	34	26	12	13	1	8
Proprietors and firm members	29	26	5	2	17	5
Performing manual labor	18	15	2	2	10	4
Man-hours worked by production and development workers:						
1954, 1,000	574	481	163	221	86	104
1939, do	[3]535	(NA)	116	151	...	[3]268
At mines:						
Underground, do	108	108	...	87	11	10
Open-pit, do	158	135	69	40	25	24
Surface (mine shops, yards, etc.), do	9	9	...	9	...	...
At preparation plants, do	299	229	94	85	50	70
Man-hours spent on development and exploration work (included above), do	4	4	1	1	2	...
Principal expenses designated below, total, $1,000	1,790	1,261	480	616	140	554
Wages of production and development workers, do	918	723	303	317	93	205
Salaries of all other employees, do	190	132	45	71	1	73
Minerals received for preparation, do	51	51	...	49	2	...
Supplies, do	[4]395	134	53		38	
Purchased fuel:						
Coal, do	[5]1	...	...		...	
Fuel oil, do	[5]33	32	22		([6])	
Gas, do	...	...	...	179	...	276
Other fuels, do	[5]66	64	23		6	
Purchased electric energy, do	[4]70	59	29		...	
Contract work, do	[4]66	66	5		...	
Purchased machinery installed, do	[5]188	178	142		4	
Capital expenditures, total, do	[5]273	262	194		7	
Development and exploration of mineral property, do	[5]37	37	18		3	
Preparation plant construction, do	[5]52	44	44		...	
Other construction, do	[5]22	22	22		...	
New machinery and equipment, do	[5]156	154	108		3	
Used plant and equipment, do	[5]6	5	2		1	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total, 1,000	[5]15	14	8		1	
Per production worker	53	58	97		27	
Prime movers, 1,000	[5]12	11	6		1	
Electric motors driven by purchased energy, do	[5]3	3	2	(NA)	([6])	(NA)
Horsepower rating of electric motors driven by energy generated at establishment, do	...	...	...		...	
Energy used, million kwh equivalent	[5]29	27	14		2	
Coal, 1,000 short tons	([6])	...	...		...	
Fuel oil, 1,000 barrels	[5]5	5	4		([6])	
Gas, million cu.ft	...	...	...		...	
Electric energy purchased, million kwh	[5]4	2	1		...	
Electric energy generated and used, do	...	...	...		...	
Water intake, including mine water used, million gallons	[5]389	375	370		2	
Per production worker, do	1.36	1.56	4.25		0.04	

NA Not available.

[1]For 1954, represents lead-zinc ores; dimension granite (including operations classified in manufactures); abrasive stones, natural; and peat [2]See table 1, footnote 6. [3]See table 1, footnote 1. [4]See table 1, footnote 9. [5]See table 1, footnote 10. [6]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
New Hampshire, all mineral operations:									
Including operations in manufactures	44	2,510	1,914	285	34	574	918	190	[2]267
Mineral industries only	39	1,980	1,658	240	26	481	723	132	257
Sand and gravel	11	926	846	87	12	163	303	45	192
Clay, ceramic, and refractory minerals	8	833	619	97	13	221	317	71	[2]75
Mica and other industries (including operations in manufactures)	25	751	449	101	9	190	298	74	
COUNTY									
Cheshire	5	490	365	50	5	109	153	27	31
Grafton	15	452	353	74	4	151	203	19	37
Mica	9	144	117	29	1	51	59	1	6
Merrimack (including operations classified in manufactures)	3	952	874	86	16	165	345	96	124
Sullivan	9	122	102	31	2	59	71	2	15

[1]See table 1, footnote 6.
[2]See table 1, footnote 10.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All industries: Total	All industries: Classified in mineral industries	All industries: Included in manufactures	Metal mining (lead-zinc ores)	Nonmetallic minerals (except fuels) mining: Dimension stone (granite): Classified in mineral industries	Nonmetallic minerals (except fuels) mining: Dimension stone (granite): Included in manufactures	Nonmetallic minerals (except fuels) mining: Crushed and broken stone (Stone, n.e.c.) (included in manufactures)
New Hampshire, total	44	39	5	1	2	2	1
Belknap	2	2	...	...	...	...	...
Cheshire	5	5	...	...	...	...	...
Coos	1	1	...	...	1	...	...
Grafton	15	15	...	...	...	...	...
Hillsborough	3	3	...	...	1	...	...
Merrimack	3	1	2	...	...	2	...
Rockingham	4	2	2	...	...	...	...
Strafford	2	1	1	...	...	...	1
Sullivan	9	9	...	1	...	...	...

County	Nonmetallic minerals (except fuels) mining—Continued: Sand and gravel	Clay, ceramic, and refractory minerals: Feldspar	Clay, ceramic, and refractory minerals: Clay, ceramic, and refractory minerals, n.e.c.: Classified in mineral industries	Clay, ceramic, and refractory minerals: Clay, ceramic, and refractory minerals, n.e.c.: Included in manufactures	Abrasive stones, natural	Miscellaneous nonmetallic minerals: Mica	Miscellaneous nonmetallic minerals: Peat
New Hampshire, total	11	5	1	2	1	17	1
Belknap	1	...	...	...	...	...	1
Cheshire	1	2	...	...	...	2	...
Coos	...	...	...	...	...	...	...
Grafton	3	2	...	...	1	9	...
Hillsborough	2	...	...	...	...	...	...
Merrimack	1	...	...	...	...	...	...
Rockingham	1	...	1	2	...	...	...
Strafford	1	...	...	...	...	...	...
Sullivan	1	1	...	...	...	6	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
New Hampshire, all mineral operations:												
Including operations classified in manufactures	44	6	22	9	3	3	1	...	...	...	...	...
Mineral industries only	39	5	19	9	3	2	1	...	...	...	...	...
Metal mining (lead-zinc ores)	1	...	...	1	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	43	6	22	8	3	3	1	...	...	...	...	...
Mineral industries only	38	5	19	8	3	2	1	...	...	...	...	...
Dimension stone (granite):												
Classified in mineral industries	2	...	2	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	1	...	...	1	...	...	...	...	...	...
Crushed and broken stone, n.e.c. (included in manufactures)	1	1	...	...	...	...	...	...	...	...	...	...
Sand and gravel	11	...	5	4	1	...	1	...	...	...	...	...
Clay, ceramics, and refractory minerals:												
Feldspar	5	1	...	2	1	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	1	...	...	...	...	1	...	...	...	...	...	...
Included in manufactures	2	...	2	...	...	...	...	...	...	...	...	...
Abrasive stones, natural	1	1	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Mica	17	3	11	2	1	...	...	...	...	...	...	...
Peat	1	...	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
New Hampshire, total	240	1,658	375	1.56	226	372	...	...	378	...	32	...	68
Sand and gravel	87	846	370	4.25	437	367	...	...	370	...	32	...	68
Mica	48	175	2	0.04	11	2	...	...	2	...	...	...	[1]100
Clay, ceramic, and refractory minerals and other industries	105	637	3	0.03	5	3	...	...	6	...	100	...	...

[1]Represents "not specified."

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NEW JERSEY

129-1

MINING IN NEW JERSEY: 1954

Rank among States:
Employment, 31
Value of shipments, 30



VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$5,500
NONMETALLIC MINERALS, EXCEPT FUELS, MINING	12,100

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations					
	1954	1939[1]	1929[2]	1954	1939[1]	1929	1919	1909	1902[3]
Number of operating companies	128	117	(NA)	52	[4]55	(NA)	(NA)	[4]131	[4]154
Number of establishments	166	(NA)	117	66	(NA)	65	97	133	(NA)
Number of mines and quarries	162	137	138	61	63	71	102	151	165
Number of preparation plants	122	108	(NA)	49	42	(NA)	(NA)	(NA)	(NA)
Value of shipments[5]...$1,000	[6]51,455	14,124	15,790	[6]35,365	10,154	11,100	9,309	8,347	6,605
Value added in mining...do	[6]38,941	11,103	12,540	[6]27,764	8,032	8,806	6,336	7,309	4,358
Number of persons engaged, total	4,250	4,010	4,222	3,135	3,121	3,314	5,029	6,698	6,436
Production and development workers	3,543	3,369	3,630	2,627	2,642	2,906	4,576	6,323	[7]5,981
All other employees	647	609	[8]566	490	463	[8]394	413	279	455
Proprietors and firm members	60	32	26	18	16	14	40	96	
Performing manual labor	33	16	(NA)	6	7	(NA)	20	14	(NA)
Man-hours worked by production and development workers...1,000	7,948	6,451		5,857	4,974		(NA)	(NA)	
Principal expenses designated below, total...$1,000	31,835	8,947	10,127	22,388	6,778	7,670	9,093	4,102	5,514
Wages of production and development workers...do	15,172	4,314	5,400	11,262	3,489	4,309	5,393	2,801	2,870
Salaries of all other employees...do	3,597	1,612	[8]1,477	2,645	1,167	[8]1,067	727	263	397
Minerals received for preparation...do	482	(NA)	(NA)	482	(NA)	(NA)	...	...	(NA)
Supplies...do	[9]7,986	1,720	1,960	5,295	1,337	1,459	2,195	675	
Purchased fuel...do	[9]1,720	570	585	1,029	363	423	622	319	2,236
Purchased electric energy...do	[9]1,595	636	562	1,018	399	359	98		
Contract work...do	[9]1,283	95	143	657	23	53	58	44	11
Purchased machinery installed...do	[10]3,477		823	1,966		470	(NA)		
Capital expenditures, total...do	[10]4,029	(NA)	(NA)	2,846	(NA)	(NA)			
Development and exploration of mineral property...do	[10]846		105	786		96	832	(NA)	(NA)
Preparation plant construction...do	[10]763	163		605	86				
Other construction...do	[10]196		(NA)	120		(NA)	(NA)		
New machinery and equipment...do	[10]2,040	417		1,282	186				
Used plant and equipment...do	[10]184	61		53	18				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	[10]208	91	69	125	62	50	34	18	22
Per production worker	59	27	19	48	23	17	7	3	4
Prime movers...1,000	[10]132	46	38	72	30	30	27	18	22
Electric motors driven by purchased energy...do	[10]76	45	31	53	32	20	7	...	...
Horsepower rating of electric motors driven by energy generated at establishment...do	[10]9	16	10	9	15	10	9	3	...
Energy used...million kwh equivalent	[10]699	652	908	411	499	732	(NA)		
Coal...1,000 short tons	[10]44	61	104	43	54	91	126		
Fuel oils...1,000 barrels	[10]158	47	43	52	18	13	19	(NA)	(NA)
Gas...million cu.ft	[10]111	...	...	...	...	...	...		
Electric energy purchased...million kwh	[10]120	43	23	87	29	17	(NA)		
Electric energy generated and used...do	[10]6	11	24	6	11	24	(NA)		

NA Not available.

[1]Except for number of mines, excludes data for nonproducing operations as follows: 1 iron ore mine and 1 crushed and broken trap rock quarry and crushing plant. Also excludes data for dimension stone dressing plants operated in conjunction with quarries, if any.

[2]Excludes data for common clay and shale and peat operations. There were 12 common clay and shale mines in 1939, with products valued at $202,000.

[3]Includes data for lime plants producing lime valued at $123,000. Also, includes data for 2 cement plants.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[6]Excludes figures for the Uranium-radium-vanadium ores industry. No data on value of shipments and cost of ores received for milling were obtained for this industry for 1954.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Figures for fuels, electric energy, and contract work for clay operations classified in manufactures are included with figure for supplies.

[10]Excludes statistics for clay operations classified in manufactures.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	New Jersey, total		Metal mining			Nonmetallic minerals (except fuels) mining	
							Total	
		Including operations classified in manufactures	Mineral industries only	Total	Iron ores	Zinc ores, Metal mining contract services, and Uranium-radium-vanadium ores	Including operations classified in manufactures	Mineral industries only
1	Number of operating companies	128	117	10	4	6	119	108
2	Number of establishments	166	153	13	5	8	153	140
	Number of mines and quarries:							
3	1954	162	149	9	5	4	153	140
4	1939	137	(NA)	7	5	2	130	(NA)
5	Number of preparation plants	122	122	8	5	3	114	114
	Value of shipments:[1]							
6	1954, $1,000	[2]51,455	50,855	[2]11,951	6,740	[2]5,211	39,504	38,904
7	1939, do.	[3]14,124	(NA)	([3])	2,932	([3])	([3])	(NA)
8	Value added in mining, do.	[2]38,941	38,593	[2]9,398	5,118	[2]4,280	29,543	29,195
9	Number of persons engaged, total	4,250	4,186	1,716	887	829	2,534	2,470
10	Production and development workers	3,543	3,479	1,470	797	673	2,073	2,009
11	All other employees	647	647	241	90	151	406	406
12	Proprietors and firm members	60	60	5	...	5	55	55
13	Performing manual labor	33	33	...	...	...	33	33
	Man-hours worked by production and development workers:							
14	1954, 1,000	7,948	7,820	2,756	1,468	1,288	5,192	5,064
15	1939, do.	[3]6,451	(NA)	([3])	1,220	([3])	([3])	(NA)
	At mines:							
16	Underground, do.	1,297	1,297	1,293	794	499	4	4
17	Open-pit, do.	1,975	1,847	75	5	70	1,900	1,772
18	Surface (mine shops, yards, etc.), do.	743	743	297	175	122	446	446
19	At preparation plants, do.	3,933	3,933	1,091	494	597	2,842	2,842
20	Man-hours spent on development and exploration work (included above), do.	245	245	220	220	...	25	25
21	Principal expenses designated below, total, $1,000	31,835	31,343	10,840	6,457	4,383	20,995	20,503
22	Wages of production and development workers, do.	15,172	14,932	5,965	3,556	2,409	9,207	8,967
23	Salaries of all other employees, do.	3,597	3,597	1,287	523	764	2,310	2,310
24	Minerals received for preparation, do.	[2]482	482	([2])	...	([2])	482	482
25	Supplies, do.	[5]7,986	7,734	2,484	1,655	829		5,250
	Purchased fuel:							
26	Coal, do.	[5]372	372	222	13	209		150
27	Fuel oil, do.	[5]641	641	65	45	20	8,996	576
28	Gas, do.	...	...	...	...	...		...
29	Other fuels, do.	[5]707	707	18	11	7		689
30	Purchased electric energy, do.	[5]1,595	1,595	588	471	117		1,007
31	Contract work, do.	[5]1,283	1,283	211	183	28		1,072
32	Purchased machinery installed, do.	[6]3,477	3,477	527	137	390		2,950
33	Capital expenditures, total, do.	[6]4,029	4,029	1,562	893	669		2,467
34	Development and exploration of mineral property, do.	[6]846	846	746	718	28		100
35	Preparation plant construction, do.	[6]763	763	268	17	251		495
36	Other construction, do.	[6]196	196	21	21	...		175
37	New machinery and equipment, do.	[6]2,040	2,040	527	137	390		1,513
38	Used plant and equipment, do.	[6]184	184	...	...	...		184
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total, 1,000	[6]208	208	52	25	27		156
40	Per production worker	59	60	35	31	40		78
41	Prime movers, 1,000	[6]132	132	26	4	22		106
42	Electric motors driven by purchased energy, do.	[6]76	76	26	21	5	(NA)	50
43	Horsepower rating of electric motors driven by energy generated at establishment, do.	[6]9	9	6	...	6		3
44	Energy used, million kwh equivalent	[6]699	699	101	67	34		598
45	Coal, 1,000 short tons	[6]44	44	27	1	26		17
46	Fuel oil, 1,000 barrels	[6]158	158	17	12	5		141
47	Gas, million cu. ft.	...	...	...	...	...		...
48	Electric energy purchased, million kwh	[6]120	120	63	36	27		57
49	Electric energy generated and used, do.	[6]6	6	...	...	...		6
50	Water intake, including mine water used, million gallons	[6]7,560	7,560	630	606	24		6,930
51	Per production worker, do.	2.13	2.17	0.43	0.76	0.04		3.45

NA Not available.

[1]See table 1, footnote 5.

[2]See table 1, footnote 6.

[3]The slate total includes data for 2 zinc ores mines, 4 dimension atone quarries, and 1 kaolin and ball clay pit, for which separate statistics are not available. See also table 1, footnote 1.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued										
Crushed and broken stone			Sand and gravel			Clay, ceramic, and refractory minerals			Nonmetallic minerals (except fuels) contract services, Peat, and Miscellaneous nonmetallic minerals, n.e.c.	
Granite	Trap rock	Limestone and Marble	Common sand and gravel	Glass sand	Foundry sand	Including operations classified in manufactures	Mineral industries only: Fire clay	Mineral industries only: Clay, ceramic, and refractory minerals, n.e.c.		
4	13	5	61	3	6	24	8	5	9	1
4	20	5	75	3	9	28	8	7	9	2
4	19	5	75	3	10	28	8	7	9	3
2	18	7	45	3	14	32	(NA)	(NA)	9	4
4	18	5	61	3	9	9	5	4	5	5
1,177	18,024	2,213	9,733	2,289	3,468	2,117	692	825	483	6
[4]95	2,481	[4]358	2,296	477	995	938	(NA)	(NA)	(NA)	7
1,065	14,093	1,759	6,976	1,223	2,630	1,435	501	586	362	8
45	930	196	692	99	260	240	117	59	72	9
44	784	126	538	82	232	213	97	52	54	10
...	145	65	112	17	28	24	18	6	15	11
1	1	5	42	...	...	3	2	1	3	12
1	...	3	27	...	...	1	...	1	1	13
124	2,236	307	1,252	191	520	451	221	102	111	14
[4]51	979	[4]236	826	190	359	553	(NA)	(NA)	(NA)	15
...	4	...	...	...	...	...	...	...	...	16
24	985	82	341	27	128	235	70	37	78	17
...	175	3	137	16	22	84	78	6	9	18
100	1,072	222	774	148	370	132	73	59	24	19
...	4	...	7	3	...	...	...	...	11	20
382	8,429	1,370	5,541	1,522	1,892	1,499	572	435	360	21
271	3,816	514	2,371	366	933	757	336	181	179	22
...	883	349	663	98	191	78	62	16	48	23
...	...	...	(NA)	(NA)	(NA)	...	}	...	...	24
59	2,550	333	1,424	827	188		73	168	110	25
...	42	92	...	9	...		6	1	...	26
9	67	55	218	83	113		27	1	3	27
...	...	...	...	...	...	664	...	...	...	28
15	349	16	236	5	27		10	18	13	29
28	337	8	281	128	168		17	34	6	30
...	385	3	348	6	272		41	16	1	31
5	1,338	53	1,266	27	218		34	1	8	32
4	1,137	106	1,016	19	148		17	...	20	33
...	27	...	60	...	...		...	...	13	34
2	327	1	139	5	14		6	...	1	35
...	86	6	32	9	35		6	...	1	36
2	646	99	665	4	89		5	...	3	37
...	51	...	120	1	10		...	...	2	38
11	49	5	56	6	21		5	1	2	39
250	63	36	105	73	90		48	27	37	40
9	27	4	43	1	16		3	1	2	41
2	22	1	13	5	5	(NA)	2	([7])	([7])	42
...	...	3	([5])	...	([5])		...	...	...	43
8	171	102	182	49	57		22	7	...	44
...	5	10	...	1	...		1	([7])	...	45
2	15	12	64	19	23		6	([7])	([7])	46
...	...	...	...	...	...		...	...	...	47
1	20	([7])	14	8	11		1	2	([7])	48
...	...	6	...	...	...		...	...	...	49
5	227	15	5,451	638	499		70	4	21	50
0.11	0.29	0.12	10.13	7.78	2.15		0.72	0.06	0.39	51

[4]Data for 1 stone, n.e.c., quarry are included with the figures for granite.
[5]See table 1, footnote 9.
[6]See table 1, footnote 10.
[7]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
New Jersey, all mineral operations: Including operations in manufactures	166	51,455	38,941	3,543	647	7,948	15,172	3,597	[1]3,845
Mineral industries only	153	50,855	38,593	3,479	647	7,820	14,932	3,597	3,845
Metal mining, total	13	11,951	9,398	1,470	241	2,756	5,965	1,287	1,562
Iron ores	5	6,740	5,118	797	90	1,468	3,556	523	718
Zinc ores, Metal mining contract services, and Uranium-radium-vanadium ores	8	5,211	4,280	673	151	1,288	2,409	764	28
Nonmetallic minerals (except fuels) mining: Including operations in manufactures	153	39,504	29,543	2,073	406	5,192	9,207	2,310	(NA)
Mineral industries only	140	38,904	29,195	2,009	406	5,064	8,967	2,310	2,283
Crushed and broken stone	29	21,414	16,917	954	210	2,667	4,601	1,232	1,196
Sand and gravel	87	15,490	10,829	852	157	1,963	3,670	952	1,052
Clay, ceramic, and refractory minerals: Including operations in manufactures	28	2,117	1,435	213	24	451	757	78	(NA)
Mineral industries only	15	1,517	1,087	149	24	323	517	78	17
Nonmetallic minerals (except fuels) contract services, Peat, and Miscellaneous nonmetallic minerals, n.e.c.	9	483	362	54	15	111	179	48	18
COUNTY									
Atlantic	8	169	135	[2]28	(2)	43	[2]96	(2)	2
Bergen (mineral industries only)	6	1,157	915	38	6	102	198	76	108
Burlington (mineral industries only)	10	780	602	54	6	134	247	27	84
Sand and gravel	6	658	523	44	6	115	214	27	83
Camden	7	804	580	70	21	145	305	115	136
Cape May	3	258	186	22	6	51	77	30	52
Cumberland	15	6,259	4,227	361	60	820	1,439	377	247
Gloucester	7	527	382	36	9	79	134	32	74
Hunterdon	5	470	350	63	...	176	240	...	21
Middlesex: Including operations in manufactures	24	2,968	2,894	268	(NA)	585	1,047	(NA)	(NA)
Mineral industries only	18	2,528	1,646	221	53	492	875	200	232
Clay pits operated as part of manufacturing plants	6	440	238	47	(NA)	93	172	(NA)	(NA)
Monmouth	8	852	559	58	4	133	259	45	126
Morris, total	18	7,973	6,035	764	131	1,495	3,551	840	943
Metal mining	6	5,011	3,605	672	75	1,248	3,043	429	754
Nonmetallic minerals (except fuels) mining	12	2,962	2,430	92	56	247	508	411	189
Ocean	5	1,147	592	44	3	111	204	17	52
Passaic	13	8,880	7,721	275	60	633	1,352	293	170
Crushed and broken stone	6	7,874	6,897	189	51	481	988	245	95
Somerset	5	7,290	5,500	415	47	1,143	1,978	271	633
Sussex	10	7,388	6,049	760	210	1,533	2,750	1,088	773
Warren	8	2,077	1,785	141	16	272	594	96	135
Sand and gravel	4	161	137	[2]17	(2)	33	[2]60	(2)	24

NA Not available.

[1]See table 1, footnote 10.

[2]Figures for "All other employees" are included with those for "Production and development workers."

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All operations			Metal mining				Nonmetallic minerals (except fuels) mining			
								Crushed and broken stone			
	Total	Classified in mineral industries	Included in manufactures	Iron ores	Zinc ores	Metal mining contract services	Uranium-radium-vanadium ores	Limestone	Granite	Marble	Trap rock
New Jersey, total	166	153	13	5	3	4	1	4	4	1	20
Atlantic	8	8	...	...	...	...	...	...	...	...	...
Bergen	8	6	2	...	...	...	...	...	...	...	...
Burlington	11	10	1	...	...	...	...	1	...	...	...
Camden	8	7	1	...	...	...	...	...	...	...	...
Cape May	3	3	...	...	...	...	...	...	...	...	...
Cumberland	15	15	...	...	...	...	...	...	...	...	...
Essex	2	2	...	...	...	...	...	...	...	...	2
Gloucester	7	7	...	...	...	...	...	...	...	...	...
Hunterdon	5	5	...	...	...	...	...	1	1	...	2
Mercer	2	2	...	...	...	...	...	...	...	...	1
Middlesex	24	18	6	...	...	...	1	...	...	...	1
Monmouth	8	8	...	...	...	...	...	...	...	...	...
Morris	18	18	...	3	...	3	...	...	2	...	2
Ocean	5	5	...	...	...	...	...	...	...	...	...
Passaic	14	13	1	1	...	...	...	...	...	...	6
Salem	2	2	...	...	...	...	...	...	...	...	...
Somerset	6	5	1	...	...	...	...	...	...	...	5
Sussex	10	10	...	...	3	...	...	2	1	...	...
Union	1	1	...	...	...	...	...	...	...	...	1
Warren	9	8	1	1	...	1	...	...	...	1	...

County	Nonmetallic minerals (except fuels) mining—Continued										
	Sand and gravel			Clay, ceramic, and refractory minerals					Nonmetallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals	
						Clay included in manufactures—					
	Common sand and gravel	Glass sand	Foundry sand	Fire clay	Clay, ceramic, and refractory minerals, n.e.c.	Brick and hollow tile	Clay refractories	Structural clay products, n.e.c.		Peat	Miscellaneous nonmetallic minerals, n.e.c.
New Jersey, total	75	3	9	8	7	10	2	1	3	3	3
Atlantic	7	...	1	...	...	...	...	...	...	...	...
Bergen	5	...	...	...	1	2	...	...	...	...	...
Burlington	6	...	...	...	1	1	...	...	...	...	2
Camden	5	...	1	...	...	1	...	...	1	...	...
Cape May	3	...	...	...	...	...	...	...	...	...	...
Cumberland	6	3	5	1	...	...	...	...	...	...	...
Essex	...	...	...	...	...	...	...	...	...	...	...
Gloucester	5	...	1	...	...	...	...	...	...	...	1
Hunterdon	...	...	...	...	1	...	...	...	...	...	...
Mercer	1	...	...	...	...	...	...	...	...	...	...
Middlesex	5	...	1	7	3	3	2	1	...	...	...
Monmouth	8	...	...	...	...	...	...	...	...	...	...
Morris	8	...	...	...	...	...	...	...	...	...	...
Ocean	5	...	...	...	...	...	...	...	...	...	...
Passaic	3	...	...	...	...	1	...	...	2	1	...
Salem	2	...	...	...	...	...	...	...	...	...	...
Somerset	...	...	...	...	...	1	...	...	...	...	...
Sussex	2	...	...	...	...	...	...	...	...	2	...
Union	...	...	...	...	...	...	...	...	...	...	...
Warren	4	...	...	...	1	1	...	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
New Jersey, all mineral operations:												
Including operations classified in manufactures	166	8	52	38	27	24	8	6	3	...	...	...
Mineral industries only	153	7	45	33	27	24	8	6	3	...	...	...
Metal mining, total	13	1	1	2	1	1	1	3	3	...	...	...
Iron ores	5	...	...	...	...	...	1	3	1	...	...	...
Zinc ores	3	1	...	...	...	...	...	...	2	...	...	...
Metal mining contract services	4	...	1	2	1	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	1	...	...	...	...	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	153	7	51	36	26	23	7	3	...	...	...	...
Mineral industries only	140	6	44	31	26	23	7	3	...	...	...	...
Crushed and broken stone:												
Limestone	4	...	2	...	1	...	...	1	...	...	...	...
Granite	4	...	...	3	...	1	...	...	...	...	...	...
Marble	1	...	...	...	1	...	...	...	...	...	...	...
Trap rock	20	...	3	1	...	10	4	2	...	...	...	...
Sand and gravel:												
Common sand and gravel	75	5	27	20	16	7	...	...	...	...	...	...
Glass sand	3	...	...	...	1	2	...	...	...	...	...	...
Foundry sand	9	1	...	3	2	1	2	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	8	...	5	...	2	...	1	...	...	...	...	...
Included in manufactures	2	...	1	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c:												
Classified in mineral industries	7	...	2	3	1	1	...	...	...	...	...	...
Included in manufactures	11	1	6	4	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	3	...	2	...	1	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels):												
Peat	3	...	2	...	...	1	...	...	...	...	...	...
Miscellaneous nonmetallic minerals, n.e.c	3	...	1	1	1	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
New Jersey, total	3,479	38,593	4,509	1.30	117	4,101	3,051	10,798	9,145	1	39	42	18
Metal mining	1,470	9,398	177	0.12	19	117	453	(D)	838	...	86	14	...
Nonmetallic minerals (except fuels) mining, total	2,009	29,195	4,332	2.16	148	3,984	2,598	(D)	8,307	1	37	43	19
Crushed and broken stone:													
Granite	44	1,065	1	0.02	1	1	4	4	7	...	...	100	...
Trap rock	784	14,093	227	0.29	16	219	...	...	227	4	...	96	...
Limestone and Marble	126	1,759	(D)	(D)	(D)	(D)	2	(D)	(D)	...	(D)	...	(D)
Sand and gravel:													
Common sand and gravel	538	6,976	3,771	7.01	541	3,456	1,680	...	6,174	...	38	40	[2]22
Glass sand	82	1,223	241	2.94	197	232	397	...	638	...	62	38	...
Foundry sand	232	2,630	31	0.13	12	27	468	...	706	87	...	...	[2]13
Clay, ceramic, and refractory minerals:													
Fire clay	97	501	26	0.27	52	25	44	1,000	510	...	...	100	...
Clay, ceramic, and refractory minerals, n.e.c.	52	586	1	0.02	2	...	3	3	3	...	...	...	...
Nonmetallic minerals (except fuels) contract services, Peat, and Nonmetallic minerals, n.e.c	54	362	(D)	(D)	(D)	(D)	...	...	(D)	...	(D)	(D)	...

D Withheld to avoid approximately disclosing data for individual companies.

[1]For computations of water intake per production worker, including mine water used, see table 2.

[2]Includes "not specified" as follows: for Common sand and gravel, 9 percent; and for Foundry sand, 13 percent

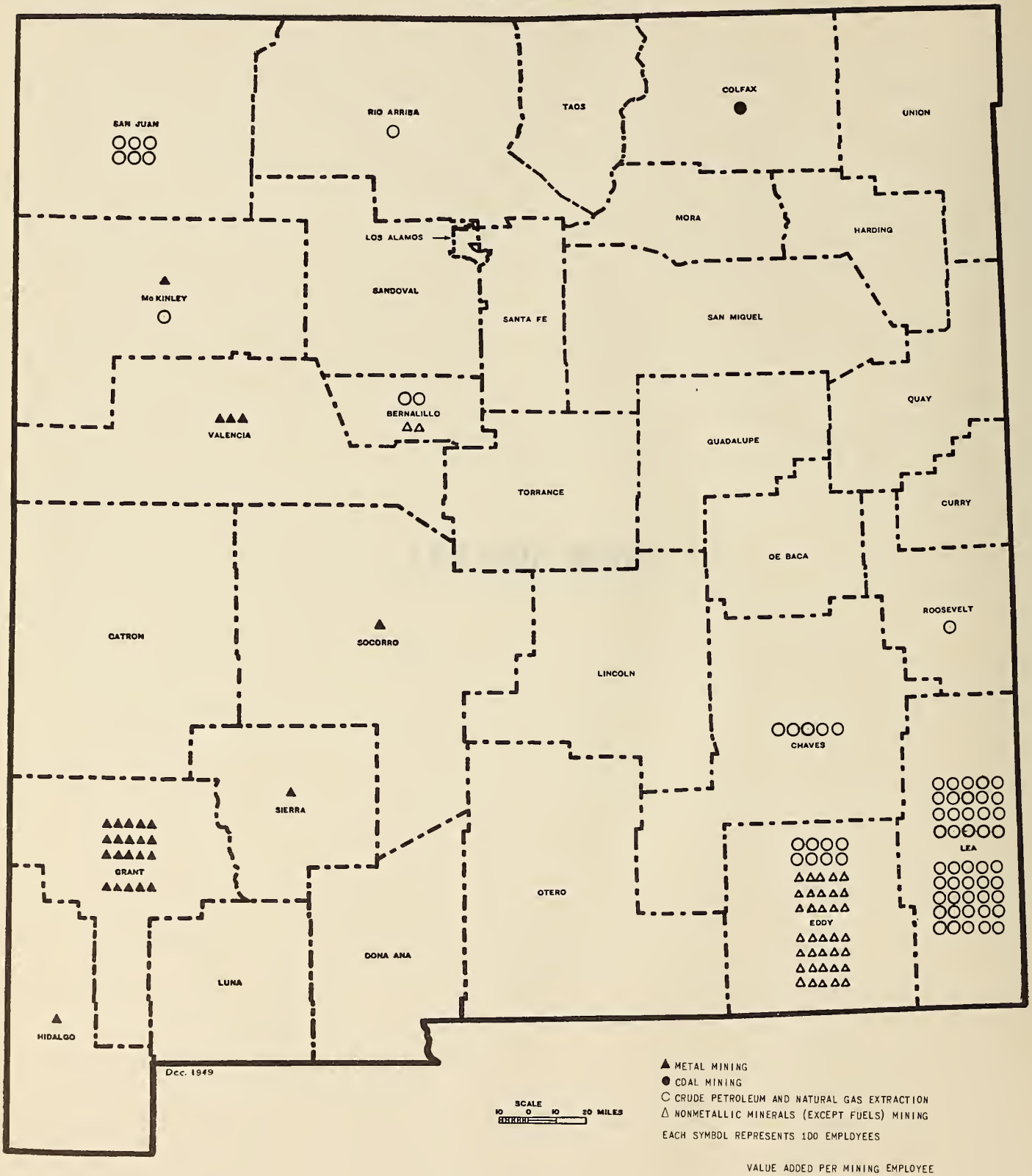
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NEW MEXICO

130-1

MINING IN NEW MEXICO: 1954

Rank among States:
Employment, 15
Value of shipments, 9



▲ METAL MINING
● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING AND NONMETALLIC MINERALS (EXCEPT FUELS) MINING	$13,200
COAL MINING	3,900
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	35,800

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries and all contract service operations		
	1954[1]	1939[2]	1919[3]	1909[3]	1902	1954[1]	1939[4]	1929[5]
Number of operating companies	646	277	(NA)	[6]149	[6]366	245	[6]103	(NA)
Number of establishments	693	(NA)	103	154	(NA)	262	(NA)	93
Number of mines and quarries	265	103	152	358	320	264	103	114
Number of oil and gas wells producing at end of year	9,169	2,981	1	...	...	xxx	xxx	xxx
Number of preparation plants	66	30	(NA)	(NA)	(NA)	47	24	(NA)
Value of shipments[7] $1,000	[8]403,274	59,160	18,873	5,588	2,686	106,997	21,723	27,142
Value added in mining ..... do	[8]338,096	44,683	13,383	4,203	1,939	90,070	16,876	20,884
Number of persons engaged, total	14,494	9,082	7,760	5,963	2,915	7,127	6,397	7,673
Production and development workers	11,545	8,065	7,216	5,429	[9]2,633	5,771	5,822	7,116
All other employees	2,389	856	472	404	282	1,119	516	[10]522
Proprietors and firm members	560	161	72	130	(NA)	237	59	35
Performing manual labor	295	63	31	49	(NA)	160	39	(NA)
Man-hours worked by production and development workers 1,000	23,599	14,817	(NA)	(NA)	(NA)	11,597	10,506	(NA)
Principal expenses designated below, total $1,000	212,016	27,197	17,412	5,721	2,965	58,307	13,015	17,816
Wages of production and development workers ..... do	51,274	10,605	10,710	3,819	1,918	26,108	6,870	10,250
Salaries of all other employees ..... do	14,510	2,115	1,202	517	300	7,265	1,298	[10]1,308
Minerals received for preparation ..... do	5,773	(NA)	10	...	(NA)	258	(NA)	(NA)
Supplies ..... do	61,571	5,243	3,968	939	} 626	16,971	3,558	4,441
Purchased fuel[11] ..... do	4,500	1,393	1,320	} 283		2,351	911	1,391
Purchased electric energy ..... do	1,816	319	69			1,301	301	308
Contract work ..... do	72,572	7,522	133	163	121	4,053	77	118
Purchased machinery installed ..... do	41,036	} (NA)	(NA)	} (NA)	} (NA)	7,957	} (NA)	1,209
Capital expenditures, total ..... do	121,656		(NA)			15,530		(NA)
Development and exploration of mineral property ..... do	66,903		3,518			5,427		2,284
Preparation plant construction ..... do	9,516	} 984				2,709	} 372	
Other construction ..... do	5,757					1,322		(NA)
New machinery and equipment ..... do	36,701	5,307				5,704	639	
Used plant and equipment ..... do	2,779	344				368	179	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	825	166	61	17	9	263	99	92
Per production worker	71	21	8	3	3	46	17	13
Prime movers 1,000	719	148	56	16	9	175	84	74
Electric motors driven by purchased energy ..... do	106	18	5	1	...	88	15	18
Horsepower rating of electric motors driven by energy generated at establishment ..... do	90	58	25	5	2	73	56	44
Energy used ..... million kwh equivalent	12,384	9,234	(NA)	} (NA)	} (NA)	3,323	1,545	1,941
Coal[12] ..... 1,000 short tons	10	83	236			10	83	240
Fuel oil[12] ..... 1,000 barrels	123	174	51			57	84	46
Gas[12] ..... million cu.ft	37,021	26,829	...			9,355	2,380	...
Electric energy purchased ..... million kwh	193	21	(NA)			165	19	17
Electric energy generated and used ..... do	163	119	(NA)			90	114	111

[1]Except for number of operating companies, number of establishments, number of mines and quarries, and number of preparation plants, excludes data for one dimension sandstone quarry and dressing plant and for one common clay pit.

[2]Includes data for 4 or less contractors engaged in oil and gas field machine shop work. Such contractors were not classified in the mineral industries for 1954.

[3]Excludes data for sand, gravel, common clay, and shale operations. There were 8 such mines in 1939 with products valued at $113,000.

[4]Includes data for one nonproducing company in the Crude petroleum or Natural gas industry.

[5]Excludes data for common clay and shale operations. There were 4 such operations in 1939 with products valued at $422,000.

[6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[8]Excludes data for the Uranium-radium-vanadium ores industry.

[9]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[10]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[11]For 1954, represents purchased fuels only. For 1939, includes data for fuels produced and used at the same establishment for power or heat.

[12]Includes fuels produced and used at the same establishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	New Mexico (mineral industries only), total	Bituminous coal	Crude petroleum and natural gas extraction			
				Total	Crude petroleum	Natural gas	Natural gas liquids
1	Number of operating companies	644	23	391	221	33	11
2	Number of establishments	691	24	419	224	37	18
	Number of mines, quarries, and producing oil and gas wells:						
3	1954	9,432	24	9,169	7,927	1,171	xxx
4	1939	3,084	42	2,981	(NA)	(NA)	xxx
5	Number of preparation plants	65	1	19	xxx	xxx	19
	Value of shipments:[1]						
6	1954, $1,000	[2]403,274	732	294,824	222,491	14,240	19,386
7	1939, do	59,160	3,579	37,365	[3]32,071	([3])	1,765
8	Value added in mining, do	[2]338,096	614	[6]247,205	194,155	15,064	([6])
9	Number of persons engaged, total	14,494	183	7,223	3,006	413	629
10	Production and development workers	11,545	147	5,655	1,975	280	557
11	All other employees	2,389	12	1,256	895	99	70
12	Proprietors and firm members	560	24	312	136	34	2
13	Performing manual labor	295	14	129	47	8	...
	Man-hours worked by production and development workers:						
14	1954, 1,000	23,599	225	11,710	3,975	560	1,156
15	1939, do	14,817	2,664	[5]4,282	[3]2,757	([3])	313
	At mines:						
16	Underground, do	3,485	158	xxx	xxx	xxx	xxx
17	Open-pit, do	2,029	14	xxx	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.), do	[8]1,754	53	xxx	xxx	xxx	xxx
19	At preparation plants, do	[8]5,777		1,156	xxx	xxx	1,156
20	At oil and gas field operations, do	10,554	xxx	10,554	3,975	560	xxx
21	Man-hours spent on development and exploration work (included above), do	7,734	...	5,963	1,496	388	...
22	Principal expenses designated below, total, $1,000	212,016	497	[6]152,442	95,021	12,983	[6]13,232
23	Wages of production and development workers, do	51,274	350	24,646	8,959	1,273	2,663
24	Salaries of all other employees, do	14,510	28	7,127	5,028	503	361
25	Minerals received for preparation, do	5,773	...	[6]49,630	xxx	xxx	[6]4,213
26	Supplies, do	61,571	48		24,867	5,383	
	Purchased fuel:						
27	Coal, do	69	...	...	...	...	...
28	Fuel oil, do	567	...	277	26	64	...
29	Gas, do	1,823	...	223	76	3	66
30	Other fuels, do	2,041	6	1,570	458	29	15
31	Purchased electric energy, do	1,816	37	515	452	...	57
32	Contract work, do	72,572	28	68,454	55,155	5,728	5,857
33	Purchased machinery installed, do	41,036	25	32,961	21,069	2,039	6,500
34	Capital expenditures, total, do	121,656	26	106,011	73,767	14,070	13,300
35	Development and exploration of mineral property, do	66,903	...	61,476	52,078	8,171	...
36	Preparation plant construction, do	9,516	...	6,807	xxx	xxx	6,807
37	Other construction, do	5,757	6	4,430	2,357	2,027	...
38	New machinery and equipment, do	36,701	18	30,899	18,955	2,650	6,491
39	Used plant and equipment, do	2,779	2	2,399	377	1,222	2
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total, 1,000	825	10	549	174	13	141
41	Per production worker	71	68	97	88	46	253
42	Prime movers, 1,000	719	5	531	158	13	139
43	Electric motors driven by purchased energy, do	106	5	18	16	...	2
44	Horsepower rating of electric motors driven by energy generated at establishment, do	90	([9])	17	1	...	14
45	Energy used, million kwh equivalent	12,384	10	9,043	2,458	165	5,884
	Produced and used for fuel:						
46	Coal, 1,000 short tons	1	1	xxx	xxx	xxx	xxx
47	Crude petroleum, 1,000 barrels	15	xxx	15	15	...	...
48	Natural gas, million cu.ft.	25,410	xxx	25,410	6,663	236	18,511
	Purchased fuel:						
49	Coal, 1,000 short tons	9	...	...	...	...	...
50	Fuel oil, 1,000 barrels	108	...	50	4	10	...
51	Gas, million cu.ft.	11,611	...	2,256	770	223	585
52	Electric energy purchased, million kwh	193	1	28	24	...	4
53	Electric energy generated and used, do	163	...	73	1	...	72
54	Water intake, including mine water used, million gallons	9,557	4	1,916	275	47	1,426
55	Per production worker, do	0.83	0.03	0.34	0.14	0.17	2.56

NA Not available. xxx Not applicable. [1]See table 1, footnote 7. [2]See table 1, footnote 8. [3]Figures for the Natural gas industry are included with those for the Crude petroleum industry. See also footnote 5. [4]Figures for Building, repairing, and dismantling rigs and derricks contract services are included with those for Oil and gas field contract services, n.e.c. [5]Figures for the Manganese ores, the Potash, soda, and borate minerals; and the Pumice and pumicite industries, and for 1 nonproducing Crude petroleum or Natural gas establishment are included with those for Other industries.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction-Continued			Metal mining and Nonmetallic minerals (except fuels) mining							
Oil and gas field contract services										
Drilling oil and gas wells	Building, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Total (mineral industries only)	Manganese ores	Uranium-radium-vanadium ores	Sand and gravel	Potash, soda, and borate minerals	Pumice and pumicite	Other industries	
59	3	75	233	49	39	22	5	14	107	1
60	3	77	248	54	39	23	5	14	113	2
71	...	...	239	60	42	22	5	14	96	3
(NA)	(NA)	(NA)	61	2	...	4	3	1	51	4
xxx	xxx	xxx	45	5	1	22	5	10	2	5
29,966	216	8,525	[2]107,718	2,232	(NA)	3,687	64,747	1,043	36,009	6
3,309	([4])	[4]220	18,216	([5])	...	91	([5])	([5])	[5]18,125	7
18,724	198	6,544	[2]90,277	1,614	(NA)	3,092	51,778	850	32,943	8
2,055	25	1,095	7,088	279	460	180	3,439	74	2,656	9
1,859	21	963	5,743	206	305	144	2,787	53	2,248	10
148	...	44	1,121	15	116	17	652	11	310	11
48	4	88	224	58	39	19	...	10	98	12
27	2	45	152	53	14	10	...	4	71	13
3,905	34	2,080	11,664	463	609	310	5,429	106	4,747	14
1,110	([4])	[4]102	[5]7,871	([5])	...	36	([5])	([5])	[5]7,835	15
xxx	xxx	xxx	3,327	272	142	...	2,614	...	299	16
xxx	xxx	xxx	2,015	90	103	[7]156	...	35	1,631	17
xxx	xxx	xxx	1,701	16	364	(NA)	812	1	813	18
xxx	xxx	xxx	4,621	85		154	2,003	70	2,004	19
3,905	34	2,080	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
3,775	34	270	1,771	44	51	1	22	2	1,651	21
22,143	114	5,491	59,077	1,280	4,943	1,227	32,411	408	18,808	22
8,502	96	3,153	26,278	649	1,221	513	14,626	169	9,100	23
1,029	...	206	7,355	63	639	72	4,998	38	1,545	24
xxx	xxx	xxx	258	...	...	...	...	37	221	25
10,053	12	1,644	17,408	164	894	365	9,631	63	6,291	26
...	...	...	69	...	57	...	...	...	12	27
168	...	19	290	22	32	36	29	12	159	28
78	...	...	1,600	...	30	...	1,085	9	476	29
689	6	373	465	18	66	150	4	17	210	30
3	...	3	1,264	16	...	9	992	11	236	31
1,621	...	93	4,090	348	2,004	82	1,046	52	558	32
2,601	47	705	8,050	206	586	375	5,238	37	1,608	33
3,971	47	856	15,619	156	3,235	422	5,056	45	6,705	34
1,227	...	...	5,427	43	233	54	243	11	4,843	35
xxx	xxx	xxx	2,709	6	2,416	28	58	4	197	36
8	...	38	1,321	5	17	3	1,206	2	88	37
2,054	47	702	5,784	32	486	245	3,483	25	1,513	38
682	...	116	378	70	83	92	66	3	64	39
132	...	89	266	6	11	41	93	5	110	40
71	...	92	46	31	37	285	33	94	49	41
132	...	89	183	6	11	41	37	4	84	42
...	...	...	83	([9])	...	([2])	56	1	26	43
...	...	2	73	([9])	2	1	47	...	23	44
434	...	102	3,331	11	117	49	2,267	19	868	45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
...	...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
...	...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	48
...	...	...	9	...	8	...	...	...	1	49
31	...	5	58	3	5	7	9	2	32	50
678	...	...	9,355	...	98	...	6,910	37	2,310	51
([9])	...	([9])	164	1	...	([9])	122	([9])	41	52
([1])	...	...	90	1	5	...	84	...	...	53
167	...	1	7,637	154	162	84	4,498	...	2,739	54
0.09	...	([9])	1.33	0.75	0.53	0.58	1.61	...	1.22	55

[6]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown for these industries. [7]Includes man-hours worked on floating equipment. [8]For bituminous coal, man-hours at "Preparation plant" are included with man-hours at "Surface (mine shops, yards, etc.)" since less than 25 percent of the coal shipped was mechanically cleaned. [9]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
New Mexico (mineral industries only):									
Including crude petroleum and natural gas extraction	691	[2]403,274	[2]338,096	11,545	2,389	23,599	51,274	14,510	118,877
Excluding crude petroleum and natural gas extraction	272	[2]108,450	[2]90,457	5,890	1,133	11,889	26,628	7,383	15,265
Bituminous coal	24	732	614	147	12	225	350	28	24
Crude petroleum and natural gas extraction, total	419	294,824	[3]247,205	5,655	1,256	11,710	24,646	7,127	103,612
Crude petroleum and natural gas[4]	261	236,731	209,219	2,255	994	4,535	10,232	5,531	86,238
Natural gas liquids	18	19,386	([3])	557	70	1,156	2,663	361	13,298
Oil and gas field contract services[5]	140	38,707	25,466	2,843	192	6,019	11,751	1,235	4,076
Metal mining and Nonmetallic minerals (except fuels) mining, total	248	[2]107,718	[2]90,277	5,743	1,121	11,664	26,278	7,355	15,241
Manganese ores	54	2,232	1,614	206	15	463	649	63	86
Uranium-radium-vanadium ores	39	(NA)	(NA)	305	116	609	1,221	639	3,152
Sand and gravel	23	3,687	3,092	144	17	310	513	72	330
Potash, soda, and borate minerals	5	64,747	51,778	2,787	652	5,429	14,626	4,998	4,990
Pumice and pumicite	14	1,043	850	53	11	106	169	38	42
Other metal mining and Nonmetallic minerals (except fuels) mining	113	36,009	32,943	2,248	310	4,747	9,100	1,545	6,641
COUNTY									
Bernalillo, total	17	(NA)	(NA)	[6]258	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	9	(NA)	(NA)	[6]87	([6])	(NA)	(NA)	(NA)	(NA)
Other mineral industries	8	[2]604	[2]495	74	97	179	343	434	147
Chaves, total	33	(NA)	(NA)	[6]248	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	29	(NA)	(NA)	[6]231	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	4	134	94	17	...	34	43	...	80
Colfax (Bituminous coal only)	9	409	351	59	4	82	177	16	...
Dona Ana (mineral industries only)	5	143	138	12	2	17	31	2	1
Eddy:									
Including crude petroleum and natural gas	100	(NA)	(NA)	[6]3,888	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	9	65,349	52,216	2,839	658	5,559	14,879	5,035	4,993
Crude petroleum and natural gas[7]	91	(NA)	(NA)	[6]390	([6])	(NA)	(NA)	(NA)	(NA)
Potash, soda, and borate minerals	5	64,747	51,778	2,787	652	5,429	14,626	4,998	4,990
Grant	49	(D)	(D)	1,838	260	(D)	(D)	(D)	(D)
Hidalgo	12	(D)	(D)	[6]133	([6])	(D)	(D)	(D)	(D)
Lea	187	(NA)	(NA)	[6 8]2,490	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	174	(NA)	(NA)	[6]1,998	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	12	12,226	11,270	440	52	906	2,117	276	11,980
Luna	20	311	296	42	13	82	119	63	46
Metal mining	15	227	235	34	7	65	95	29	41
McKinley	27	(D)	(D)	[6]160	([6])	(D)	(D)	(D)	(D)
Bituminous coal	7	184	141	27	1	43	76	2	15
Rio Arriba:									
Including crude petroleum and natural gas	19	(NA)	(NA)	[6]102	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	13	[2]582	[2]490	41	8	85	116	26	92
Crude petroleum and natural gas[7]	6	(NA)	(NA)	[6]53	([6])	(NA)	(NA)	(NA)	(NA)
Pumice and pumicite	3	499	405	21	5	48	75	20	35
Roosevelt	3	(NA)	(NA)	[6]75	([6])	(NA)	(NA)	(NA)	(NA)
Sandoval	8	[9]111	[9]88	[6]23	([6])	[9]30	[9]41	[9]8	[9]13
San Juan:									
Including crude petroleum and natural gas	41	(NA)	(NA)	[6]392	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	17	(D)	(D)	99	13	(D)	(D)	(D)	(D)
Crude petroleum and natural gas[7]	24	(NA)	(NA)	[6]280	([6])	(NA)	(NA)	(NA)	(NA)
Santa Fe	9	[9]204	[9]266	[6]67	([6])	[9]74	[9]79	[9]33	[9]417
Sierra	27	(D)	(D)	[6]127	([6])	(D)	(D)	(D)	(D)
Socorro	20	1,351	848	98	7	203	329	48	10
Ferro-alloy ores, except vanadium	10	623	394	45	1	95	162	10	7

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees		Man-hours worked by production and development workers (1,000)	Wages and salaries		New capital expenditures ($1,000)
				Production and development workers	All other employees		Production and development workers ($1,000)	All other employees ($1,000)	
COUNTY—Continued									
Taos	4	(D)	(D)	63	6	(D)	(D)	(D)	(D)
Union	3	217	157	9	2	16	27	8	3
Valencia	18	[2]470	[2]314	248	112	527	1,082	619	2,908

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. [1]See table 1, footnote 7. [2]See table 1, footnote 8. [3]See table 2, footnote 6. [4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. [5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries. [6]Figures for "All other employees" are included with those for "Production and development workers." [7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity. [8]Excludes data for one uranium-radium-vanadium ore establishment. [9]Excludes data for Crude petroleum or Natural gas establishments as follows: Sandoval county, 2 establishments; Santa Fe county, 1 establishment.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All mineral operations			Metal mining					
	Total	Classified in mineral industries	Included in manufactures	Iron ores	Copper ores	Lead and zinc ores	Gold and silver ores		
							Lode gold	Placer gold	Silver ores
New Mexico, total	693	691	2	2	17	14	2	2	4
Bernalillo	17	17	...	...	...	...	...	...	...
Catron	4	4	...	1	...	...	...	...	...
Chaves	33	33	...	...	...	...	...	...	...
Colfax	11	11	...	...	...	...	...	...	...
De Baca	2	2	...	...	...	...	...	...	...
Dona Ana	6	5	1	...	...	...	...	...	...
Eddy	100	100	...	...	...	...	...	...	...
Grant	49	49	...	2	6	6	2	...	2
Guadalupe	1	1	...	...	1	...	...	...	...
Hidalgo	12	12	...	...	4	...	...	...	1
Lea	187	187	...	...	...	...	...	...	...
Lincoln	4	4	...	...	...	1	...	...	...
Luna	20	20	...	...	...	1	...	...	...
McKinley	27	27	...	...	...	...	...	...	...
Otero	2	2	...	...	...	...	...	1	...
Quay	1	1	...	...	...	...	...	...	...
Rio Arriba	19	19	...	...	...	...	...	...	...
Roosevelt	3	3	...	...	...	...	...	...	...
Sandoval	8	8	...	...	...	...	...	...	...
San Juan	41	41	...	...	...	...	...	...	...
San Miguel	5	4	1	...	...	...	...	...	...
Santa Fe	9	9	...	...	2	...	...	1	...
Sierra	27	27	...	...	...	1	...	...	1
Socorro	20	20	...	...	2	5	...	...	...
Taos	4	4	...	...	...	...	...	...	...
Union	3	3	...	...	...	...	...	...	...
Valencia	18	18	...	...	1	...	...	...	...

County	Metal mining—Continued							
	Ferro-alloy ores, except vanadium				Metal mining contract services	Miscellaneous metal ores		Bituminous coal
	Manganese ores	Molybdenum ores	Tungsten ores	Columbium ores		Uranium-radium-vanadium ores	Metallic ores, n.e.c.	
New Mexico, total	54	1	2	2	11	39	6	24
Bernalillo	...	...	...	...	...	1	...	1
Catron	...	...	...	...	1	1	...	...
Chaves	...	...	...	...	...	...	...	...
Colfax	...	...	...	...	...	...	...	9
De Baca	...	...	...	...	...	1	...	...
Dona Ana	3	...	...	...	...	...	...	...
Eddy	...	...	...	...	...	...	...	...
Grant	10	...	1	...	3	1	...	...
Guadalupe	...	...	...	...	...	...	...	...
Hidalgo	4	...	1	...	...	...	...	...
Lea	...	...	...	...	...	1	...	...
Lincoln	...	...	...	...	...	...	2	...
Luna	14	...	...	...	...	...	...	...
McKinley	...	...	...	...	3	14	...	7
Otero	...	...	...	...	...	...	...	...
Quay	...	...	...	...	...	...	...	...
Rio Arriba	...	...	...	2	1	1	1	3
Roosevelt	...	...	...	...	...	...	...	...
Sandoval	1	...	...	...	...	...	...	1
San Juan	...	...	...	...	...	10	...	1
San Miguel	...	...	...	...	...	1	2	...
Santa Fe	...	...	...	...	...	...	...	1
Sierra	12	...	...	...	...	2	...	...
Socorro	10	...	...	...	...	...	...	1
Taos	...	1	...	...	...	...	1	...
Union	...	...	...	...	...	...	...	...
Valencia	...	...	...	...	3	6	...	...

See footnotes at end of table.

Table 4.--NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining						
				Dimension stone		Crushed and broken stone		Sand and gravel	Clay, ceramic, and refractory minerals, n.e.c.	
	Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Sandstone (included in manufactures)	Stone, n.e.c.	Limestone	Sandstone		Classified in mineral industries	Included in manufactures
New Mexico, total	261	18	140	1	1	1	1	23	3	1
Bernalillo	9	...		...	...	...	1	3	...	...
Catron	...	...		...	...	...	...	...	...	...
Chaves	29	...		...	...	...	...	3	1	...
Colfax	...	...		...	...	...	...	2	...	...
De Baca	...	...		...	...	...	...	1	...	...
Dona Ana	...	...		...	...	...	...	1	...	1
Eddy	91	2		...	...	...	...	1	...	...
Grant	...	...		...	1	...	...	...	1	...
Guadalupe	...	...		...	...	...	...	...	...	...
Hidalgo	...	...		...	...	...	...	...	1	...
Lea	174	12		...	...	...	...	...	...	...
Lincoln	1	...		...	...	...	...	...	...	...
Luna	...	...	(NA)	...	...	...	...	1	...	...
McKinley	1	1		...	...	...	...	...	...	...
Otero	...	...		...	...	...	...	1	...	...
Quay	...	...		...	...	...	...	1	...	...
Rio Arriba	6	...		...	...	...	...	...	...	...
Roosevelt	2	...		...	...	...	...	1	...	...
Sandoval	2	...		...	...	...	...	...	...	...
San Juan	24	3		...	...	...	...	3	...	...
San Miguel	...	...		1	...	...	...	1	...	...
Santa Fe	1	...		...	...	...	...	1	...	...
Sierra	1	...		...	...	...	...	...	...	...
Socorro	...	...		...	...	...	...	1	...	...
Taos	...	...		...	...	...	...	...	...	...
Union	...	...		...	...	...	...	...	...	...
Valencia	...	...		...	...	1	...	2	...	...

County	Nonmetallic minerals (except fuels) mining—Continued							
	Chemical and fertilizer mineral mining			Nonmetallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels) mining			
	Fluorspar	Potash, soda, and borate minerals	Chemical and fertilizer minerals, n.e.c.		Gypsum	Mica	Pumice and pumicite	Nonmetallic minerals, n.e.c.
New Mexico, total	28	5	2	1	1	6	14	6
Bernalillo	...	...	...	...	...	...	2	...
Catron	...	...	...	...	...	1	...	...
Chaves	...	...	...	...	...	...	...	...
Colfax	...	...	...	...	...	...	...	...
De Baca	...	...	...	...	...	...	...	...
Dona Ana	...	...	...	...	...	...	1	...
Eddy	...	5	...	1	...	...	...	...
Grant	13	...	...	...	...	...	...	1
Guadalupe	...	...	...	...	...	...	...	...
Hidalgo	...	...	...	...	...	...	...	1
Lea	...	...	...	...	...	...	...	...
Lincoln	...	...	...	...	...	...	...	...
Luna	3	...	1	...	...	...	...	...
McKinley	...	...	1	...	...	...	...	...
Otero	...	...	...	...	...	...	...	...
Quay	...	...	...	...	...	...	...	...
Rio Arriba	...	...	...	...	...	2	3	...
Roosevelt	...	...	...	...	...	...	...	...
Sandoval	...	...	...	...	...	...	4	...
San Juan	...	...	...	...	...	...	...	...
San Miguel	...	...	...	...	...	...	...	...
Santa Fe	...	...	...	...	...	2	1	...
Sierra	9	...	...	...	...	...	...	1
Socorro	...	...	...	...	...	...	...	1
Taos	...	...	...	...	...	1	...	1
Union	...	...	...	...	...	...	3	...
Valencia	3	...	...	...	1	...	...	1

NA Not available.

[1]See table 3, footnote 4, and for counties, footnote 7.

[2]See table 3, footnote 5.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
New Mexico, all mineral operations:												
Including operations classified in manufactures	693	153	271	98	52	74	27	10	4	2	2	...
Mineral industries only	691	153	269	98	52	74	27	10	4	2	2	...
Metal mining, total	156	53	71	14	6	8	1	1	1	...	1	...
Iron ores	2	...	1	...	1	...	...	...	...	...	...	...
Copper ores	17	5	6	3	...	1	...	1	...	...	1	...
Lead and zinc ores	14	4	6	1	2	1	...	...	...	...	...	...
Gold and silver ores:												
Lode gold	2	2	...	...	...	...	...	...	...	...	...	...
Placer gold	2	...	2	...	...	...	...	...	...	...	...	...
Silver ores	4	3	1	...	...	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Manganese ores	54	32	16	2	...	3	1	...	...	...	...	...
Molybdenum ores	1	...	...	...	...	1	...	...	...	...	...	...
Tungsten ores	2	1	1	...	...	...	...	...	...	...	...	...
Columbium ores	2	...	2	...	...	...	...	...	...	...	...	...
Metal mining contract services	11	1	7	1	1	1	...	...	...	...	...	...
Miscellaneous metal ores:												
Uranium-radium-vanadium ores	39	5	25	6	1	1	...	...	1	...	...	...
Metallic minerals, n.e.c	6	...	4	1	1	...	...	...	...	...	...	...
Bituminous coal	24	...	14	6	1	3	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	419	64	159	63	40	57	26	9	1	...	...	...
Crude petroleum and natural gas	261	57	119	37	19	14	7	8	...	...	...	...
Natural gas liquids	18	...	...	...	2	13	3	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	60	2	12	6	11	15	12	1	1	...	...	...
Building, repairing, and dismantling rigs and derricks	3	2	...	...	...	1	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	77	3	28	20	8	14	4	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	94	36	27	15	5	6	...	...	2	2	1	...
Mineral industries only	92	36	25	15	5	6	...	...	2	2	1	...
Dimension stone:												
Sandstone (included in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c. (included in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	1	...	...	1	...	...	...	...	...	...	...	...
Sandstone	1	...	...	...	...	1	...	...	...	...	...	...
Sand and gravel	23	6	8	5	1	3	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	3	2	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Fluorspar	28	22	3	2	...	1	...	...	...	...	...	...
Potash, soda, and borate minerals	5	...	...	...	...	...	...	...	2	2	1	...
Chemical and fertilizer mineral mining, n.e.c	2	...	...	2	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	1	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum	1	...	1	...	...	...	...	...	...	...	...	...
Mica	6	2	4	...	...	...	...	...	...	...	...	...
Pumice and pumicite	14	2	6	5	1	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c	6	2	1	...	2	1	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
New Mexico, total	11,545	[4]338,096	7,867	0.68	23	2,844	1,690	477	60,077	4	28	62	6
Bituminous coal	147	614	2	0.01	3	2	2	2	4	...	...	100	...
Crude petroleum and natural gas extraction, total	5,655	[5]247,205	1,916	0.34	8	1,546	xxx	xxx	[6]37,090	11	5	78	6
Crude petroleum and natural gas	2,255	209,219	322	0.14	2	1,076	xxx	xxx	(NA)	19	...	63	[7]18
Natural gas liquids	557	([5])	1,426	2.56	(NA)	468	xxx	xxx	36,600	7	6	87	...
Oil and gas field contract services:													
Drilling oil and gas wells	1,859	18,724	167	0.09	9	2	xxx	xxx	(NA)	29	10	28	[8]33
Building, repairing, and dismantling rigs and derricks	21	198	...	...	...	...	xxx	xxx	...	...	...	...	...
Oil and gas field contract services, n.e.c	963	6,544	1	([9])	([9])	...	xxx	xxx	(NA)	100	...	...	...
Metal mining and Nonmetallic minerals (except fuels) mining, total	5,743	[4]90,277	5,949	1.04	66	1,296	1,688	475	22,983	1	35	58	6
Manganese ores	206	1,614	153	0.74	95	148	1	1	163	24	20	56	...
Uranium-radium-vanadium ores	305	(NA)	162	0.53	(NA)	131	...	...	162	1	...	98	1
Sand and gravel	144	3,092	84	0.58	27	84	...	...	84	...	...	42	[8]58
Potash, soda, and borate minerals	2,787	51,778	[10]4,498	[10]1.61	[10]87	775	([10])	2	17,744	...	57	35	[7]8
Pumice and pumicite	53	850	...	...	...	...	...	...	...	...	...	...	...
Other industries	2,248	32,943	[10]2,739	1.22	83	158	([10])	472	4,830	2	3	95	...

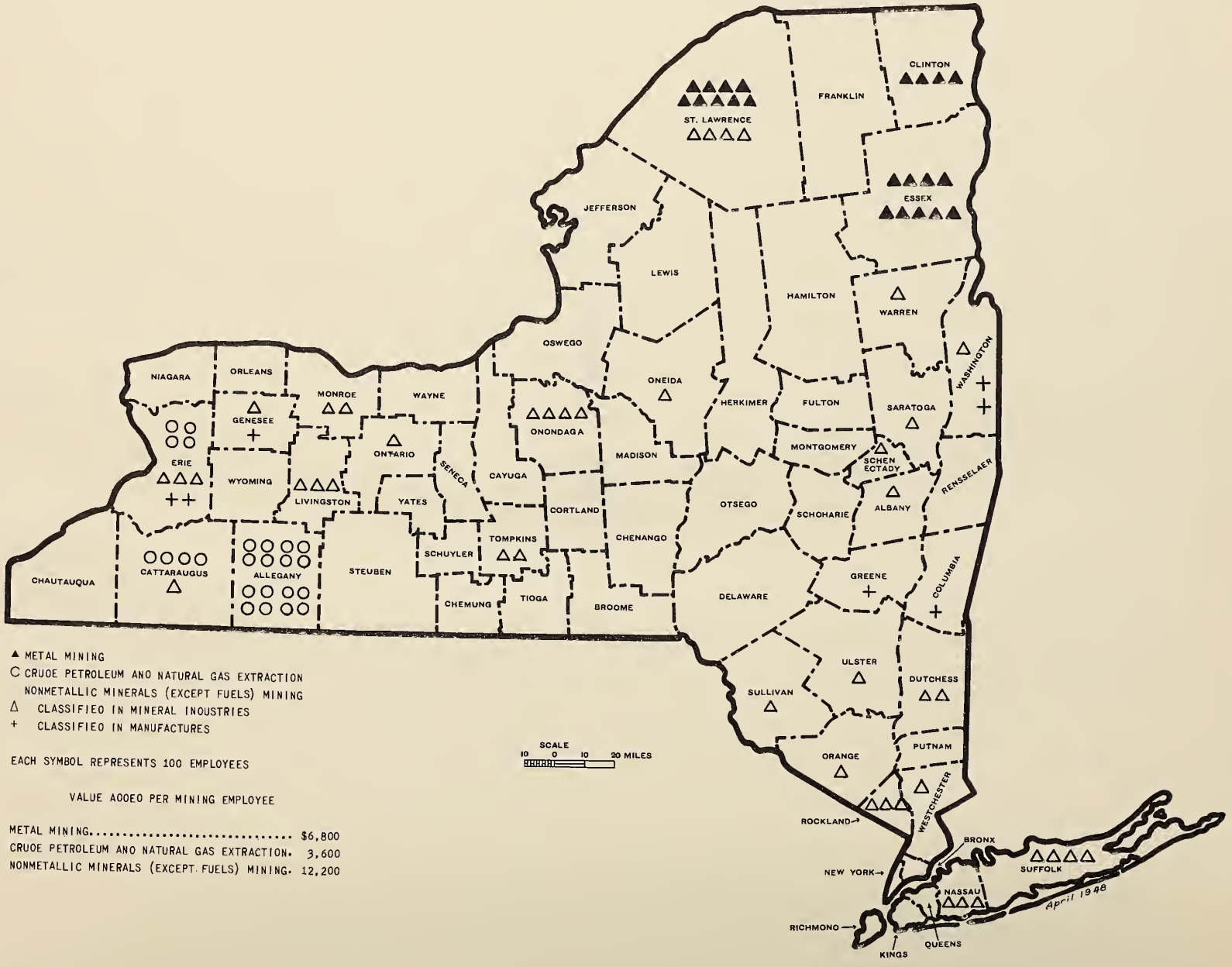
NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 27 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]See table 1, footnote 8.
[5]See table 2, footnote 6.
[6]For industries other than Natural gas liquids; includes water intake only.
[7]Represents "not specified."
[8]Includes "not specified" as follows: for Drilling oil and gas wells contract services, 27 percent; and for Sand and gravel, 56 percent.
[9]Less than one-half of the unit of measure specified.
[10]Mine water used is included with figure for water intake (except mine water).

NEW YORK

131-1

MINING IN NEW YORK: 1954

Rank among States:
Employment, 20
Value of shipments, 23



▲ METAL MINING
C CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$6,800
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	3,600
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	12,200

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations		Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement and lime establishments					Comparative statistics excluding the crude petroleum and natural gas extraction industries		
	1954	1939[1]	1954	1939[2]	1919	1909	1902[3]	1954	1939[4]	1929[5]
Number of operating companies	623	455	397	[6]334	(NA)	[6]1,356	[6]2,907	325	[6]248	(NA)
Number of establishments	694	(NA)	441	(NA)	700	1,356	(NA)	387	(NA)	261
Number of mines and quarries	387	287	113	118	147	755	699	387	287	298
Number of oil and gas wells producing at end of year	16,899	14,729	16,899	14,729	14,186	11,342	8,776	xxx	xxx	xxx
Number of preparation plants	272	217	97	93	(NA)	(NA)	(NA)	272	217	(NA)
Value of shipments[7]....$1,000	138,508	41,230	104,738	31,854	25,131	13,335	9,694	127,050	28,307	36,045
Value added in mining....do	104,719	32,817	77,883	25,069	15,524	10,212	7,713	95,708	22,150	28,448
Number of persons engaged, total	13,169	9,163	10,866	7,113	7,913	12,253	7,858	10,069	6,964	7,213
Production and development workers	8,469	7,044	6,665	5,286	6,202	9,316	[8]7,197	7,288	5,483	6,432
All other employees	3,895	1,693	3,552	1,455	815	634	661	2,570	1,378	[9]692
Proprietors and firm members	805	426	649	372	896	2,303	}	211	103	[10]89
Performing manual labor	301	135	204	106	202	665	} (NA)	131	48	} (NA)
Man-hours worked by production and development workers....1,000	18,612	14,682	14,505	(NA)	(NA)	(NA)		16,347	11,710	
Principal expenses designated below, total....$1,000	100,350	23,843	83,829	18,935	18,536	8,556	6,57:	83,533	18,674	20,164
Wages of production and development workers....do	38,544	9,696	30,273	7,002	7,497	4,723	3,947	34,779	7,702	10,030
Salaries of all other employees....do	27,766	5,734	25,841	5,148	1,432	710	645	19,323	4,815	[9]2,537
Minerals received for preparation....do	340	(NA)	340	(NA)	[11]2,692	66	(NA)	340	(NA)	(NA)
Supplies....do	[10]20,499	4,129	16,460	3,325	4,724	1,955	}	[10]17,550	3,591	5,076
Purchased fuel....do	[10]4,383	1,480	3,527	1,043	967	} 585	} 1,630	[10]3,971	1,054	918
Purchased electric energy....do	[10]3,790	1,373	3,264	1,048	435			[10]3,561	1,353	1,497
Contract work....do	[10]5,028	1,431	4,124	1,369	789	517	351	[10]4,009	159	106
Purchased machinery installed....do	[12]12,234		9,741		(NA)			[12]11,320		1,710
Capital expenditures, total....do	[12]12,485	(NA)	10,601					[12]9,409	(NA)	(NA)
Development and exploration of mineral property....do	[12]1,160		1,134		2,233	(NA)	(NA)	[12]179		618
Preparation plant construction....do	[12]1,217	[13]407	1,151					[12]1,217	321	
Other construction....do	[12]1,463		1,326		(NA)			[12]670		(NA)
New machinery and equipment....do	[12]5,982	[13]2,156	4,742					[12]4,869	1,389	
Used plant and equipment....do	[12]2,663	[13]300	2,248					[12]2,474	249	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[12]687	285	525		91	102	85	[12]609	246	146
Per production worker	81	41	79	(NA)	15	11	12	84	45	23
Prime movers....1,000	[12]426	150	296		62	91	84	[12]358	112	50
Electric motors driven by purchased energy....do	[12]261	135	229		29	11	1	[12]251	134	96
Horsepower rating of electric motors driven by energy generated at establishment....do	[12]8	13	8		6	2	3	[12]8	13	4
Energy used....million kwh equivalent	[12]3,268	1,700	3,107		(NA)			[12]2,745	1,183	1,248
Coal....1,000 short tons	[12]230	107	225		142			[12]230	107	142
Fuel oils....1,000 barrels	[12]270	93	306		...			[12]246	82	30
Gas....million cu.ft	[12]1,481	1,598	1,473		1,097	(NA)	(NA)	[12]31	11	1
Electric energy purchased....million kwh	[12]343	113	283		(NA)			[12]329	112	98
Electric energy generated and used....do	[12]1	8	1		(NA)			[12]1	8	8

NA Not available.
xxx Not applicable.

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing sandstone and slate at such operations was $78,000; this value has been included in the value of shipments and value added in mining. The comparable value for granite is not available.

[2]Includes data for 4 or less limestone quarries operated as part of lime plants and for 1 nonproducing sand and gravel establishment. See also footnote 1.

[3]Includes data for lime plants producing lime valued at $561,000.

[4]Includes data for 1 natural gasoline plant and for 4 nonproducing establishments in the crude petroleum and natural gas industries. See also footnote 1.

[5]Excludes data for common clay and shale operations. There were 34 such mines in 1939 with products valued at $420,000. Also includes data for 2 nonproducing establishments.

[6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[10]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[11]Includes purchases for resale without further processing.

[12]Excludes statistics for crushed stone and clay operations classified in manufactures.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	New York, total		Metal mining	Crude petroleum and natural gas extraction					Nonmetallic minerals (except fuels) mining, total	
								Oil and gas field contract services			
		Including operations classified in manufactures	Mineral industries only		Total	Crude petroleum	Natural gas	Drilling oil and gas wells	Oil and gas field contract services, n.e.c.	Including operations in manufactures	Mineral industries only
1	Number of operating companies	623	567	9	298	231	19	33	16	316	260
2	Number of establishments	694	629	11	307	235	23	33	16	376	311
	Number of mines, quarries, and producing oil and gas wells:										
3	1954	17,286	17,222	11	16,899	15,573	1,168	154	4	377	312
4	1939	15,016	(NA)	6	14,729	(NA)	(NA)	(NA)	(NA)	281	(NA)
5	Number of preparation plants	272	248	6	...	xxx	xxx	xxx	xxx	266	242
	Value of shipments:[2]										
6	1954.....$1,000..	138,508	128,393	42,568	11,458	8,903	1,326	975	254	84,482	74,367
7	1939.....do....	41,230	(NA)	[3]3,477	[3]12,923	[4]12,084	(4)	508	331	24,830	(NA)
8	Value added in mining.....do....	104,719	96,838	28,031	9,011	6,998	967	854	192	67,677	59,796
9	Number of persons engaged, total	13,169	12,298	4,120	3,100	2,591	275	190	44	5,949	5,078
10	Production and development workers	8,469	7,641	2,308	1,181	820	207	131	23	4,980	4,152
11	All other employees	3,895	3,876	1,811	1,325	1,258	60	5	2	759	740
12	Proprietors and firm members	805	781	1	594	513	8	54	19	210	186
13	Performing manual labor	301	283	1	170	120	8	29	13	130	112
	Man-hours worked by production and development workers:										
14	1954.....1,000..	18,612	16,907	4,645	2,265	1,559	384	282	40	11,702	9,997
15	1939.....do....	14,682	(NA)	[3]2,208	[3]2,979	[4 5]2,598	(4)	279	102	9,495	(NA)
	At mines:										
16	Underground.....do....	2,824	2,281	1,522	xxx	xxx	xxx	xxx	xxx	1,302	759
17	Open-pit.....do....	5,243	4,302	686	xxx	xxx	xxx	xxx	xxx	4,557	3,616
18	Surface (mine shops, yards, etc.).....do....	1,723	1,705	791	xxx	xxx	xxx	xxx	xxx	932	914
19	At preparation plants.....do....	6,557	6,354	1,646	xxx	xxx	xxx	xxx	xxx	4,911	4,708
20	At oil and gas field operations.....do....	2,265	2,265	xxx	2,265	1,559	384	282	40	xxx	xxx
21	Man-hours spent on development and exploration work (included above).....do....	1,341	1,336	91	427	60	88	272	7	823	818
22	Principal expenses designated below, total.....$1,000..	100,350	94,642	38,939	16,817	13,828	2,277	572	140	44,594	38,886
23	Wages of production and development workers.....do....	38,544	35,247	11,042	3,765	2,525	751	425	64	23,737	20,440
24	Salaries of all other employees.....do....	27,766	27,634	14,393	8,443	8,176	241	14	12	4,930	4,798
25	Minerals received for preparation.....do....	340	340	8	xxx	xxx	xxx	xxx	xxx	332	332
26	Supplies.....do....	[7]20,499	18,334	7,001	2,949	1,743	1,060	91	55	[7]10,549	8,384
	Purchased fuel:										
27	Coal.....do....	[7]1,708	1,707	1,637	2	(9)	...	...	...	[7]69	68
28	Fuel oils.....do....	[7]1,327	1,325	549	11	8	...	2	1	[7]767	765
29	Gas.....do....	[7]320	320	...	304	206	1	7	(9)	[7]16	16
30	Other fuels.....do....	[7]1,028	1,007	28	95	55	5	27	8	[7]905	884
31	Purchased electric energy.....do....	[7]3,790	3,767	1,630	229	225	3	1	...	[7]1,931	1,908
32	Contract work.....do....	[7]5,028	4,961	2,651	1,019	798	216	5	...	[7]1,358	1,291
33	Purchased machinery installed.....do....	[8]12,234	12,194	3,165	914	536	300	59	19	[8]8,155	8,115
34	Capital expenditures, total.....do....	[8]12,485	12,400	2,132	3,076	1,758	1,226	71	21	[8]7,277	7,192
35	Development and exploration of mineral property.....do....	[8]1,160	1,150	46	981	729	252	...	...	[8]133	123
36	Preparation plant construction.....do....	[8]1,217	1,216	253	xxx	xxx	xxx	xxx	xxx	[8]964	963
37	Other construction.....do....	[8]1,463	1,422	27	793	398	394	1	...	[8]643	602
38	New machinery and equipment.....do....	[8]5,982	5,962	1,804	1,113	468	580	50	15	[8]3,065	3,045
39	Used plant and equipment.....do....	[8]2,663	2,650	2	189	163	...	20	6	[8]2,472	2,459
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000..	[8]687	681	262	78	52	13	10	3	[8]347	341
41	Per production worker	81	89	114	66	63	63	76	130	70	82
42	Prime movers.....1,000..	[8]426	422	130	68	42	13	10	3	[8]228	224
43	Electric motors driven by purchased energy.....do....	[8]261	259	132	10	10	(5)	...	...	[8]119	117
44	Horsepower rating of electric motors driven by energy generated at establishment.....do....	[8]8	8	...	...	...	...	...	...	[8]8	8
45	Energy used.....million kwh equivalent..	[8]3,268	3,256	1,936	491	458	18	12	3	839	829
	Produced and used for fuel at same establishment:										
46	Natural gas.....million cu.ft..	[8]794	794	...	794	740	54	...	...	...	...
	Purchased fuels:										
47	Coal.....1,000 short tons..	[8]230	230	202	(9)	(9)	...	...	...	[8]28	28
48	Fuel oils.....1,000 barrels..	[8]270	268	108	4	4	...	(9)	(9)	[8]158	156
49	Gas..... million cu.ft..	[8]687	687	...	656	635	1	16	4	[8]31	31
50	Electric energy purchased.....million kwh..	[8]343	342	194	14	14	(9)	(9)	...	[8]135	134
51	Electric energy generated and used.....do....	[8]1	1	...	...	...	...	...	...	[8]1	1
52	Water intake, including mine water used.....million gallons..	[8]16,930	16,930	4,887	1,884	1,872	3	9	...	[8]10,159	10,159
53	Per production worker.....do....	2.00	2.22	2.12	1.60	2.28	0.01	0.07	...	2.04	2.45

NA Not available. xxx Not applicable. [1]Represents 9 gypsum mines; 5 talc, soapstone, and pyrophyllite mines; 4 peat mines, 1 graphite mine; 1 diatonite mine; and also 2 kaolin or ball clay mines and 2 feldspar mines. [2]See table 1, footnote 7. [3]Figures for 2 zinc ores mines, 1 natural gasoline plant, 2 natural abrasives mines, and 2 rock-salt mines are included with those for Miscellaneous nonmetallic minerals (except fuels). For other operations included in the statistics shown for this group, see footnote 1. [4]Figures for the Natural gas industry are included

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued												
Dimension stone			Crushed and broken stone				Sand and gravel		Clay, ceramic, and refractory minerals, n.e.c. (including operations classified in manufactures)	Natural abrasives and Chemical and fertilizer mineral mining	Fire clay and Miscellaneous nonmetallic minerals (except fuels) mining (including operations classified in manufactures)	
Granite (including operations classified in manufactures)	Slate (including operations classified in manufactures)	Sandstone and Stone, n.e.c. (including operations in manufactures)	Limestone (including operations classified in manufactures)	Other stone: All stone (including operations classified in manufactures)	Other stone: Trap rock	Other stone: Sandstone	Common sand and gravel	Foundry sand				
5	14	9	46	11	4	3	190	10	28	7	12	1
5	14	10	64	11	4	3	208	15	30	7	12	2
5	14	10	61	11	4	3	204	23	30	7	12	3
3	4	12	62	11	3	4	101	26	34	4	[1]24	4
1	14	5	47	11	4	3	156	15	3	5	9	5
281	1,052	770	25,752	4,882	3,618	717	28,709	702	1,363	11,520	9,451	6
70	32	156	6,956	1,811	993	175	7,607	583	420	([3])	[3]7,195	7
253	796	591	19,638	3,678	2,797	514	23,026	516	1,184	10,158	7,837	8
38	168	119	1,828	366	234	65	1,854	78	129	675	694	9
28	136	106	1,671	329	218	55	1,370	64	129	512	635	10
...	12	8	143	34	16	8	337	6	...	161	58	11
10	20	5	14	3	...	2	147	8	...	2	1	12
7	16	2	5	...	...	...	90	7	...	...	3	13
55	315	219	4,030	846	575	150	3,235	135	254	1,261	1,352	14
70	23	74	3,108	732	305	83	[5]2,592	286	254	([3])	[3]2,356	15
...	4	...	...	...	...	...	7	...	...	590	701	16
55	197	100	1,904	286	199	55	[6]1,442	81	237	47	208	17
...	4	26	460	64	44	2	(NA)	(NA)	...	338	40	18
...	110	93	1,666	496	332	93	1,786	54	17	286	403	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
...	5	...	30	735	734	...	8	1	...	13	31	21
133	719	634	14,270	3,082	2,182	413	13,702	359	662	5,658	5,375	22
105	371	372	8,065	1,851	1,350	249	6,707	169	483	2,527	3,087	23
...	83	51	861	205	121	34	1,896	29	...	1,602	203	24
...	...	...	332	...	...	...	(NA)	(NA)	...	...	...	25
19	242	115	[7]3,683	[7]643	463	69	2,928	63	[7]162	1,225	[7]1,469	26
...	...	1	[7]32	[7]4	1	...	1	3	...	...	[7]28	27
2	1	1	[7]185	[7]32	19	3	276	25	[7]3	146	[7]96	28
...	...	...	[7]1	([9])	([9])	...	7	...	...	6	[7]2	29
6	5	20	[7]251	[7]66	42	17	513	24	[7]4	11	[7]5	30
1	14	10	[7]752	[7]245	153	39	514	3	[7]9	103	[7]280	31
...	3	64	[7]108	[7]36	33	2	860	43	[7]1	38	[7]205	32
19	20	34	[8]2,553	[8]588	407	142	2,397	82	[8]14	281	[8]2,167	33
19	29	66	[8]1,783	[8]410	297	69	1,813	57	[8]14	448	[8]2,638	34
...	10	...	[8]6	[8]6	2	...	24	2	...	...	[8]85	35
...	1	9	[8]338	[8]182	170	8	62	4	...	10	[8]358	36
...	1	40	[8]257	...	...	...	128	3	[8]6	158	[8]50	37
19	4	17	[8]1,056	[8]222	125	61	1,188	44	[8]8	280	[8]227	38
...	13	...	[8]126	...	...	...	411	4	...	...	[8]1,918	39
1	4	4	[8]115	[8]24	15	6	152	7	[8]3	26	[8]11	40
53	28	38	80	[8]73	69	109	111	112	23	51	17	41
1	3	3	[8]64	[8]14	9	3	122	7	[8]1	11	[8]2	42
...	1	1	[8]51	[8]10	6	3	30	([9])	[8]2	15	[8]9	43
...	...	...	[8]1	([9])	([9])	...	1	([9])	...	6	...	44
2	6	5	[8]207	[8]44	24	6	272	53	[8]3	66	[8]381	45
...	...	...	...	...	...	...	...	...	...	...	...	46
...	...	([9])	[8]4	[8]1	([9])	...	([9])	5	...	...	[8]18	47
1	([9])	([9])	[8]38	[8]3	3	([9])	60	5	[8]1	30	20	48
...	...	...	[8]1	[8]2	2	...	8	...	...	20	([9])	49
([9])	1	([9])	[8]52	[8]13	8	2	39	([9])	...	6	[8]24	50
...	...	...	[8]1	...	...	...	...	...	...	([9])	...	51
...	...	...	[8]2,384	[8]483	425	57	6,986	108	[8]1	120	[8]77	52
...	...	...	1.43	1.47	1.95	1.04	5.10	1.69	0.01	0.23	0.12	53

with those for the Crude petroleum industry. [5]Figures for 1 nonproducing common sand and gravel mine are included with those for the Crude petroleum and Natural gas industries. [6]Includes man-hours worked on floating equipment. [7]See table 1, footnote 10. [8]See table 1, footnote 12. [9]Represents less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
New York, all mineral operations:									
Including operations in manufactures	694	138,508	104,719	8,469	2,293	18,612	38,544	14,142	[2]9,822
Mineral industries only:									
Including crude petroleum and natural gas extraction	629	128,393	96,838	7,641	2,274	16,907	35,247	14,010	9,750
Excluding crude petroleum and natural gas extraction	322	116,935	87,827	6,460	949	14,642	31,482	5,567	6,485
Metal mining	11	42,568	28,031	2,308	321	4,645	11,042	1,982	2,130
Crude petroleum and natural gas extraction, total	307	11,458	9,011	1,181	1,325	2,265	3,765	8,443	2,887
Crude petroleum and natural gas[3]	258	10,229	7,965	1,027	1,318	1,943	3,276	8,417	2,821
Oil and gas field contract services[4]	49	1,229	1,046	154	7	322	489	26	66
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	376	84,482	67,677	4,980	647	11,702	23,737	3,717	[2]4,805
Mineral industries only	311	74,367	59,796	4,152	628	9,997	20,440	3,585	4,733
Dimension stone (including operations in manufactures)	29	2,103	1,640	270	12	589	848	134	101
Crushed and broken stone (including operations in manufactures)	75	30,634	23,316	2,000	177	4,876	9,916	1,066	[2]1,302
Sand and gravel	223	29,411	23,542	1,434	343	3,370	6,876	1,925	1,455
Clay, ceramic, and refractory minerals (including operations in manufactures)	30	1,363	1,184	129	...	254	483	...	[2]14
Natural abrasives and Chemical and fertilizer mineral mining	7	11,520	10,158	512	161	1,261	2,527	1,602	448
Miscellaneous nonmetallic minerals (except fuels) (including operations in manufactures)	11	9,451	7,837	635	58	1,352	3,087	203	[2]720
COUNTY									
Albany:									
Including operations in manufactures	15	1,790	1,304	116	4	249	517	16	29
Mineral industries only	12	1,619	1,144	105	4	228	475	16	29
Allegany, total	198	(NA)	(NA)	[5]801	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	194	(NA)	(NA)	[5]776	([5])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	4	250	181	23	2	57	79	9	6
Broome	4	529	501	34	8	78	162	84	69
Cattaraugus, total	57	(NA)	(NA)	[5]252	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	49	(NA)	(NA)	[5]196	([5])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	8	666	549	45	11	102	158	45	110
Chautauqua	10	[7]406	[7]272	[7]28	[7]5	[7]55	[7]86	[7]19	[7]42
Columbia (mineral industries only)	6	585	406	37	7	85	151	16	60
Dutchess (mineral industries only)	14	4,744	3,977	214	8	546	1,320	40	133
Erie (including operations in manufactures):									
Including crude petroleum and natural gas	32	(NA)	(NA)	[5]657	([5])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	25	8,717	6,961	425	60	951	2,213	438	[2]269
Mineral industries only	15	6,127	4,814	261	60	623	1,349	438	269
Crude petroleum and natural gas[6]	7	(NA)	(NA)	[5]172	([5])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	10	3,512	2,966	96	22	247	557	203	169
Essex	5	(D)	(D)	989	141	(D)	(D)	(D)	(D)
Fulton	6	192	107	20	...	42	83	...	1
Genesee (mineral industries only)	7	(NA)	(NA)	[5]117	([5])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (mineral industries only)	4	1,179	909	84	23	243	385	110	70
Greene (including operations in manufactures)	8	1,600	1,331	[5]108	([5])	218	[5]437	([5])	(NA)
Herkimer	4	638	451	42	2	126	213	7	69
Jefferson	5	224	96	34	3	86	115	9	108
Livingston	3	(D)	(D)	242	20	(D)	(D)	(D)	(D)
Monroe	15	[8]2,636	[8]2,139	[8]145	[8]33	[8]360	[8]707	[8]162	[8]174
Nassau (mineral industries only)	16	6,773	5,477	271	32	665	1,592	172	94

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Niagara	3	746	626	36	9	81	150	57	271
Oneida	13	2,103	1,658	122	6	347	647	28	42
Onondaga (mineral industries only)	11	4,189	3,489	383	5	833	1,693	15	394
Ontario	7	[8]770	[8]463	[8]61	[8]7	[8]159	[8]255	[8]55	[8]13
Orange (mineral industries only)	13	1,190	863	81	13	158	347	70	108
Orleans	5	246	190	23	2	52	90	12	21
Rensselaer (including operations in manufactures)	7	246	208	[5]24	([5])	39	[5]93	([5])	[2]16
Rockland	7	6,298	5,087	317	21	857	2,014	152	331
St. Lawrence	14	26,139	16,122	1,303	216	2,859	6,301	1,114	2,569
Saratoga	12	624	509	59	4	125	164	24	134
Schoharie (including operations in manufactures)	5	628	399	36	3	81	148	12	[2]108
Steuben, total	8	(NA)	(NA)	[5]48	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	5	(NA)	(NA)	[5]21	([5])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	3	307	249	24	3	70	89	9	20
Suffolk	27	6,708	5,562	248	125	554	1,331	725	164
Sullivan	5	379	269	48	9	105	181	40	49
Ulster (including operations in manufactures)	9	1,528	1,037	96	...	227	532	...	7
Washington (including operations in manufactures)	21	1,501	1,098	194	16	442	600	110	[2]44
Westchester	13	964	774	94	9	191	410	35	59
Dimension stone	4	266	238	28	...	55	105	...	19
Sand and gravel	4	229	178	24	1	53	127	5	34

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 7.
[2]See table 1, footnote 12.
[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[4]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.
[5]Figures for "All other employees" are included with those for "Production and development workers."
[6]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.
[7]Excludes data for 2 crude petroleum or natural gas establishments.
[8]Excludes data for 1 crude petroleum or natural gas establishment.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	All mineral operations			Metal mining					Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining (Dimension stone)	
							Miscellaneous metal ores			Oil and gas field contract services[2]		Granite	
	Total	Classified in mineral industries	Included in manufactures	Iron ores	Lead and zinc ores (valued chiefly for zinc)	Metal mining contract services	Titanium ores	Metallic ores, n.e.c.	Crude petroleum and Natural gas[1]	Drilling oil and gas wells	Oil and gas field contract services, n.e.c.	Classified in mineral industries	Included in manufactures
New York, total.	694	629	65	5	3	1	1	1	258	33	16	4	1
Albany	15	12	3	...	...	...	...	...	...			...	...
Allegany	198	198	...	...	...	...	...	...	194			...	...
Broome	7	4	3	...	...	...	...	...	...			...	...
Cattaraugus	57	57	...	...	...	...	...	...	49			...	...
Cayuga	2	2	...	...	...	...	...	...	...			...	...
Chautauqua	10	10	...	...	...	...	...	...	2			...	...
Chemung	1	1	...	...	...	...	...	...	...			...	...
Clinton	3	1	2	1	...	...	...	...	...			...	...
Columbia	10	6	4	...	...	...	...	...	...			...	...
Cortland	2	2	...	...	...	...	...	...	...			...	...
Delaware	2	...	2	...	...	...	...	...	...			...	...
Dutchess	15	14	1	...	...	...	...	...	...			...	...
Erie	32	22	10	...	...	...	...	...	7			...	...
Essex	5	5	...	1	...	...	1	...	...			...	...
Franklin	2	2	...	...	...	...	...	...	...			...	...
Fulton	6	6	...	...	...	...	...	...	...			...	...
Genesee	8	7	1	...	...	...	...	...	3			...	...
Greene	8	3	5	...	...	...	...	...	...			...	...
Herkimer	4	4	...	...	...	...	...	...	...			...	...
Jefferson	5	5	...	...	...	...	...	...	...			...	...
Kings	1	1	...	...	...	...	...	...	...			...	...
Lewis	2	1	1	...	...	...	...	...	...			...	...
Livingston	3	3	...	...	...	...	...	...	...			...	...
Madison	2	1	1	...	...	...	...	...	...			...	...
Monroe	15	15	...	...	...	...	...	...	1			...	...
Montgomery	3	2	1	...	...	...	...	...	...			...	...
Nassau	17	16	1	...	...	...	...	...	...			...	...
Niagara	3	3	...	...	...	...	...	...	...			...	...
Oneida	13	13	...	1	...	...	...	...	...	(NA)	(NA)	...	...
Onondaga	13	11	2	...	...	...	...	...	...			...	...
Ontario	7	7	...	...	...	...	...	...	1			...	...
Orange	14	13	1	...	1	...	...	...	...			...	...
Orleans	5	5	...	...	...	...	...	...	...			...	...
Oswego	3	3	...	...	...	...	...	...	...			...	...
Otsego	4	4	...	...	...	...	...	...	...			...	...
Putnam	2	2	...	...	...	...	...	...	...			...	...
Queens	2	2	...	...	...	1	...	...	1			...	...
Rensselaer	7	5	2	...	...	...	...	...	...			...	...
Richmond	2	2	...	...	...	...	...	...	...			...	...
Rockland	7	7	...	...	...	...	...	...	...			...	...
St. Lawrence	14	14	...	2	2	...	...	...	...			...	...
Saratoga	12	12	...	...	...	...	...	...	...			...	...
Schenectady	3	3	...	...	...	...	...	...	...			...	...
Schoharie	5	2	3	...	...	...	...	...	...			...	...
Schuyler	1	1	...	...	...	...	...	...	1			...	...
Seneca	2	2	...	...	...	...	...	...	...			...	...
Steuben	8	8	...	...	...	...	...	...	5			...	...
Suffolk	27	27	...	...	...	...	...	...	...			...	...
Sullivan	5	5	...	...	...	...	...	...	...			...	...
Tioga	3	3	...	...	...	...	...	...	...			...	...
Tompkins	3	2	1	...	...	...	...	...	...			...	...
Ulster	9	5	4	...	...	...	...	...	...			...	...
Warren	3	2	1	...	...	...	...	...	...			...	...
Washington	21	7	14	...	...	...	...	...	...			...	...
Wayne	3	3	...	...	...	...	...	...	...			...	...
Westchester	14	13	1	...	...	...	...	1	...			4	1
Wyoming	1	1	1	...	...	...	...	...	1			...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nonmetallic minerals (except fuels) mining—Continued											
	Dimension stone—Continued				Crushed and broken stone							
	Slate (included in manufactures)	Sandstone		Stone, n.e.c. (included in manufactures)	Limestone		Slate	Marble	Trap rock	Sandstone	Stone, n.e.c.	
		Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in manufactures[3]					Classified in mineral industries	Included in wholesale trade
New York, total.	14	5	4	1	48	16	1	1	4	3	1	1
Albany	...	...	...	...	2	...	...	...	...	...	...	...
Allegany	...	...	...	...	...	...	...	...	...	...	...	...
Broome	1	...	...	1	...	...	...	...	...	...	1	1
Cattaragus	...	...	...	...	...	...	...	...	...	...	...	...
Cayuga	...	...	...	...	1	...	...	...	...	...	...	...
Chautauqua	...	...	...	...	...	...	...	...	...	...	...	...
Chemung	...	...	...	...	...	...	...	...	...	...	...	...
Clinton	...	...	...	...	...	2	...	...	...	...	...	...
Columbia	...	...	...	...	2	2	...	...	...	...	...	...
Cortland	...	...	...	...	...	...	...	...	...	...	...	...
Delaware	...	...	2	...	...	...	...	...	...	...	...	...
Dutchess	...	...	...	...	3	...	...	...	...	...	...	...
Erie	...	...	...	...	3	3	...	...	...	...	...	...
Essex	...	...	...	...	...	...	...	...	...	...	...	...
Franklin	...	1	...	...	...	...	...	...	...	...	...	...
Fulton	...	...	...	...	...	...	...	...	...	...	...	...
Genesee	...	...	...	...	3	...	...	...	...	...	...	...
Greene	...	...	...	...	...	3	...	...	...	1	...	...
Herkimer	...	...	...	...	1	...	...	...	...	1	...	...
Jefferson	...	...	...	...	1	...	...	...	...	...	...	...
Kings	...	...	...	...	...	...	...	...	...	...	...	...
Lewis	...	...	...	...	...	1	...	...	...	...	...	...
Livingston	...	...	...	...	...	...	...	...	...	...	...	...
Madison	...	...	...	...	1	1	...	...	...	...	...	...
Monroe	...	...	...	...	3	...	...	...	...	...	...	...
Montgomery	...	...	...	...	1	1	...	...	...	...	...	...
Nassau	...	...	...	...	...	...	...	...	...	...	...	...
Niagara	...	...	...	...	2	...	...	...	...	...	...	...
Oneida	...	...	...	...	3	...	...	...	...	...	...	...
Onondaga	...	...	...	...	3	...	...	...	...	...	...	...
Ontario	...	...	...	...	2	...	...	...	...	...	...	...
Orange	...	...	...	...	1	...	...	...	...	...	...	...
Orleans	...	2	...	...	1	...	...	...	...	...	...	...
Oswego	...	...	...	...	...	...	...	...	...	...	...	...
Otsego	...	...	...	...	2	...	...	...	...	...	...	...
Putnam	...	...	...	...	1	...	...	...	...	...	...	...
Queens	...	...	...	...	...	...	...	...	...	...	...	...
Rensselaer	...	...	...	...	...	...	...	...	1	...	...	...
Richmond	...	...	...	...	...	...	...	...	...	...	...	...
Rockland	...	...	...	...	1	...	...	...	3	...	...	...
St. Lawrence	...	...	...	...	3	...	...	...	...	...	...	...
Saratoga	...	...	...	...	1	...	...	...	...	...	...	...
Schenectady	...	...	...	...	...	...	...	...	...	...	...	...
Schoharie	...	...	...	...	2	2	...	...	...	...	...	...
Schuyler	...	...	...	...	...	...	...	...	...	...	...	...
Seneca	...	...	...	...	...	...	...	...	...	...	...	...
Steuben	...	...	...	...	...	...	...	...	...	...	...	...
Suffolk	...	...	...	...	...	...	...	...	...	...	...	...
Sullivan	...	...	...	...	...	...	...	...	...	1	...	...
Tioga	...	...	...	...	...	...	...	...	...	...	...	...
Tompkins	...	1	1	...	...	...	...	...	...	...	...	...
Ulster	...	1	...	...	1	...	...	...	...	...	...	...
Warren	...	...	...	...	1	1	...	...	...	...	...	...
Washington	13	...	...	...	1	...	1	...	...	...	...	...
Wayne	...	...	...	...	1	...	...	...	...	...	...	...
Westchester	...	...	...	...	1	...	...	1	...	...	...	...
Wyoming	...	...	1	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.--NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nonmetallic minerals (except fuels) mining—Continued												
	Sand and gravel		Clay, ceramic, and refractory minerals, n.e.c.			Natural abrasives, except sand		Chemical and fertilizer mineral mining		Miscellaneous nonmetallic minerals (except fuels)			
										Gypsum		Talc, soapstone, and pyrophyllite	Peat
	Common sand and gravel	Foundry sand	Fire clay (included in manufactures)	Classified in mineral industries	Included in manufactures	Natural abrasive stones	Natural abrasives, except sand, n.e.c.	Rock salt	Chemical and fertilizer mineral mining, n.e.c.	Classified in mineral industries	Included in manufactures		
New York, total.	208	15	1	6	24	1	3	2	1	2	3	3	3
Albany	4	3	...	3	3	...	...	...	...	...	...	...	...
Allegany	4	...	...	...	...	...	...	...	...	...	...	...	...
Broome	3	...	...	...	...	...	...	...	...	...	...	...	...
Cattaraugus	7	...	...	1	...	...	...	...	...	...	...	...	...
Cayuga	1	...	...	...	...	...	...	...	...	...	...	...	...
Chautauqua	8	...	...	...	...	...	...	...	...	...	...	...	...
Chemung	1	...	...	...	...	...	...	...	...	...	...	...	...
Clinton	...	...	...	...	...	...	...	...	...	...	...	...	...
Columbia	3	1	...	...	2	...	...	...	...	...	...	...	...
Cortland	2	...	...	...	...	...	...	...	...	...	...	...	...
Delaware	...	...	...	...	...	...	...	...	...	...	...	...	...
Dutchess	10	...	...	...	1	...	...	...	...	...	...	...	1
Erie	10	...	1	1	4	...	...	...	...	1	2	...	...
Essex	2	...	...	...	...	...	...	...	1	...	...	...	...
Franklin	1	...	...	...	...	...	...	...	...	...	...	...	...
Fulton	6	...	...	...	...	...	...	...	...	...	...	...	...
Genesee	1	...	...	...	...	...	...	...	...	...	1	...	...
Greene	1	1	...	...	2	...	...	...	...	...	...	...	...
Herkimer	2	...	...	...	...	...	...	...	...	...	...	...	...
Jefferson	4	...	...	...	...	...	...	...	...	...	...	...	...
Kings	1	...	...	...	...	...	...	...	...	...	...	...	...
Lewis	1	...	...	...	...	...	...	...	...	...	...	...	...
Livingston	2	...	...	...	...	...	...	1	...	...	...	...	...
Madison	...	...	...	...	...	...	...	...	...	...	...	...	...
Monroe	10	...	...	...	...	...	...	...	...	1	...	...	...
Montgomery	1	...	...	...	...	...	...	...	...	...	...	...	...
Nassau	16	...	...	...	1	...	...	...	...	...	...	...	...
Niagara	1	...	...	...	...	...	...	...	...	...	...	...	...
Oneida	7	2	...	...	...	...	...	...	...	...	...	...	...
Onondaga	8	...	...	...	2	...	...	...	...	...	...	...	...
Ontario	4	...	...	...	...	...	...	...	...	...	...	...	...
Orange	10	...	...	1	1	...	...	...	...	...	...	...	...
Orleans	2	...	...	...	...	...	...	...	...	...	...	...	...
Oswego	3	...	...	...	...	...	...	...	...	...	...	...	...
Otsego	2	...	...	...	...	...	...	...	...	...	...	...	...
Putnam	1	...	...	...	...	...	...	...	...	...	...	...	...
Queens	...	...	...	...	...	...	...	...	...	...	...	...	...
Rensselaer	4	...	...	...	2	...	...	...	...	...	...	...	...
Richmond	2	...	...	...	...	...	...	...	...	...	...	...	...
Rockland	3	...	...	...	...	...	...	...	...	...	...	...	...
St. Lawrence	4	...	...	...	...	...	...	...	...	...	...	3	...
Saratoga	3	8	...	...	...	...	...	...	...	...	...	...	...
Schenectady	3	...	...	...	...	...	...	...	...	...	...	...	...
Schoharie	...	...	...	...	1	...	...	...	...	...	...	...	...
Schuyler	...	...	...	...	...	...	...	...	...	...	...	...	...
Seneca	...	...	...	...	...	...	...	...	...	...	...	...	2
Steuben	3	...	...	...	...	...	...	...	...	...	...	...	...
Suffolk	27	...	...	...	...	...	...	...	...	...	...	...	...
Sullivan	4	...	...	...	...	...	...	...	...	...	...	...	...
Tioga	3	...	...	...	...	...	...	...	...	...	...	...	...
Tompkins	...	...	...	...	...	...	...	1	...	...	...	...	...
Ulster	2	...	...	...	4	1	...	...	...	...	...	...	...
Warren	...	...	...	...	...	...	1	...	...	...	...	...	...
Washington	5	...	...	...	1	...	...	...	...	...	...	...	...
Wayne	2	...	...	...	...	...	...	...	...	...	...	...	...
Westchester	4	...	...	...	...	...	2	...	...	...	...	...	...
Wyoming	...	...	...	...	...	...	...	...	...	...	...	...	...

NA Not available.
[1]See table 3, footnote 3, and for counties, table 3, footnote 6.
[2]See table 3, footnote 4.
[3]Includes 4 quarries operated as part of establishments classified in wholesale trade.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
New York, all mineral operations:												
Including operations classified in manufactures	694	84	351	102	77	48	16	10	4	2	...	...
Mineral industries only	629	78	328	90	65	40	13	9	4	2	...	...
Metal mining, total	11	2	...	2	1	...	1	...	3	2	...	...
Iron ores	5	...	...	2	...	...	...	...	1	2	...	...
Lead and zinc ores (valued chiefly for zinc)	3	1	...	...	...	...	1	...	1	...	...	...
Metal mining contract services	1	...	...	...	1	...	...	...	...	...	...	...
Miscellaneous metal ores:												
Titanium ores	1	...	...	...	...	...	...	...	1	...	...	...
Metallic ores, n.e.c.	1	1	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	307	34	227	28	9	6	...	3	...	...	...	...
Crude petroleum and natural gas	258	32	187	25	6	5	...	3	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	33	...	26	3	3	1	...	...	...	...	...	...
Oil and gas field contract services, n.e.c.	16	2	14	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	376	48	124	72	67	42	15	7	1	...	...	...
Mineral industries only	311	42	101	60	55	34	12	6	1	...	...	...
Dimension stone:												
Granite:												
Classified in mineral industries	4	...	2	1	1	...	...	...	...	...	...	...
Included in manufactures	1	1	...	...	...	...	...	...	...	...	...	...
Slate (included in manufactures)	14	2	5	2	4	...	1	...	...	...	...	...
Sandstone:												
Classified in mineral industries	5	...	3	...	2	...	...	...	...	...	...	...
Included in manufactures	4	...	...	...	2	2	...	...	...	...	...	...
Stone, n.e.c. (included in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	48	...	7	8	12	13	6	1	1	...	...	...
Included in manufactures[1]	16	1	3	3	4	5	...	...	...	...	...	...
Slate	1	...	...	...	1	...	...	...	...	...	...	...
Marble	1	...	...	...	...	1	...	...	...	...	...	...
Trap rock	4	...	...	...	1	2	...	1	...	...	...	...
Sandstone	3	...	...	...	1	2	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in wholesale trade	1	...	...	1	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	208	37	75	43	35	14	3	1	...	...	...	...
Foundry sand	15	2	6	6	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	6	1	3	1	1	...	...	...	...	...	...	...
Included in manufactures	24	2	13	6	2	1	...	...	...	...	...	...
Natural abrasives, except sand:												
Natural abrasive stones	1	1	...	...	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	3	...	1	1	...	...	1	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Rock salt	2	...	...	...	...	...	...	2	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	1	...	...	...	...	1	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum:												
Classified in mineral industries	2	...	...	...	...	1	1	...	...	...	...	...
Included in manufactures	3	...	...	...	...	...	2	1	...	...	...	...
Talc, soapstone, and pyrophyllite	3	...	1	...	...	...	1	1	...	...	...	...
Peat	3	1	2	...	...	...	...	...	...	...	...	...

[1]Includes 4 quarries operated as part of establishments classified in wholesale trade.

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
New York, total	7,641	96,838	14,005	1.83	145	12,350	2,925	2,218	25,426	6	64	16	14
Metal mining	2,308	28,031	4,440	1.92	158	4,326	447	922	12,353	...	100	...	...
Crude petroleum and natural gas extraction, total	1,181	9,011	1,884	1.60	209	671	xxx	xxx	[4]1,884	1	([5])	80	19
Crude petroleum and natural gas	1,027	7,965	1,875	1.83	235	671	xxx	xxx	(NA)	1	([5])	80	19
Oil and gas field contract services:													
Drilling oil and gas wells	131	854	9	0.07	11	...	xxx	xxx	(NA)	...	100	...	...
Oil and gas field contract services, n.e.c.	23	192	...	...	...	...	xxx	xxx	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	4,152	59,796	7,681	1.85	128	7,353	2,478	1,296	11,189	11	59	10	20
Crushed and broken stone:													
Trap rock	218	2,797	425	1.95	152	425	...	...	425	...	100	...	...
Sandstone	55	514	57	1.04	111	53	...	...	99	...	...	...	[6]100
Limestone, Slate, Marble, and Stone, n.e.c.	1,486	17,895	2,380	1.60	133	2,285	5	886	2,488	17	79	...	[6]4
Sand and gravel:													
Common sand and gravel	1,370	23,026	4,514	3.29	196	4,301	2,472	...	7,582	10	45	17	[6]28
Foundry sand	64	516	108	1.69	209	108	...	...	108	...	...	...	[7]100
Dimension stone and Other nonmetallic minerals (except fuels) mining	959	15,048	197	0.21	13	181	1	410	487	18	82	...	...

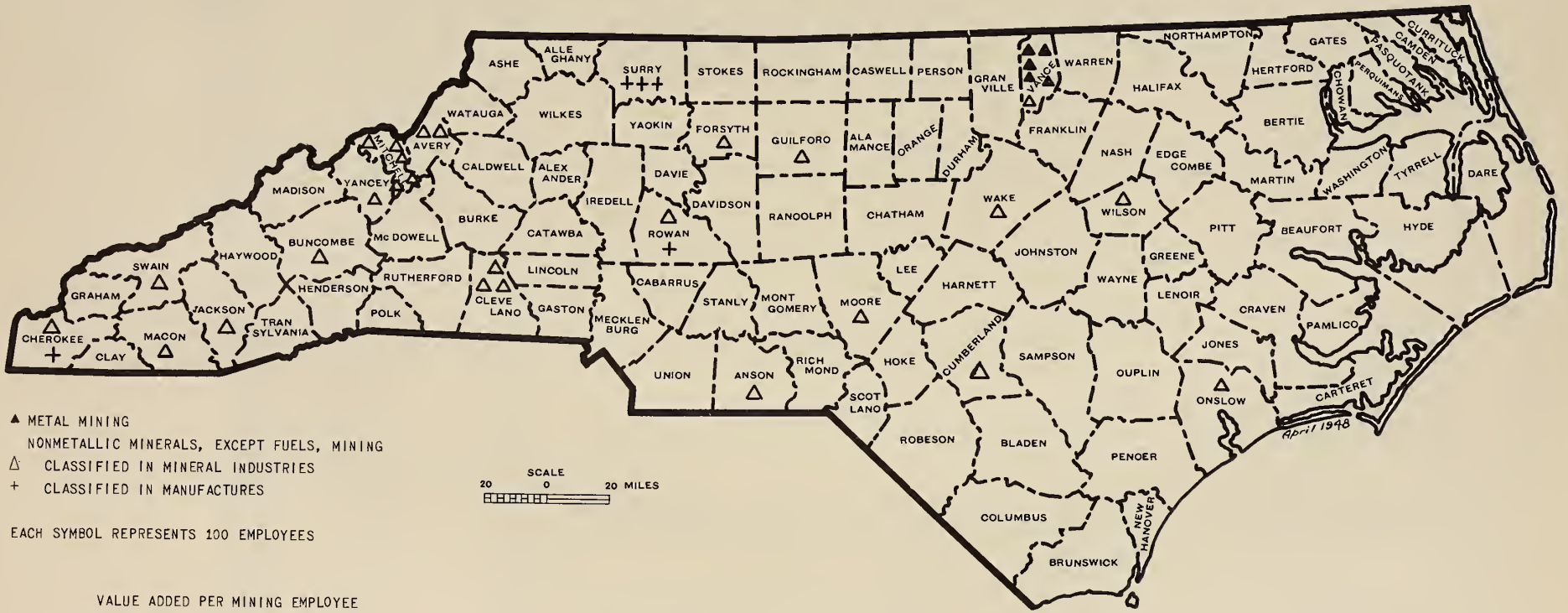
NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 10 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]Represents water intake only.
[5]Less than 0.5 percent.
[6]Includes "not specified" as follows: for Crushed and broken sandstone, 2 percent; for Crushed and broken limestone, slate, marble, and stone, n.e.c., 1 percent; and for Common sand and gravel, 21 percent.
[7]Represents "not specified."

NORTH CAROLINA

132-1

MINING IN NORTH CAROLINA: 1954

Rank among States:
Employment, 33
Value of shipments, 33



▲ METAL MINING
NONMETALLIC MINERALS, EXCEPT FUELS, MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$16,900
NONMETALLIC MINERALS, EXCEPT FUELS, MINING	7,200

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations					
	1954[1]	1939[2]	1929[3]	1954[1]	1939[2]	1929	1919[4]	1909	1902[5]
Number of operating companies	457	85	(NA)	404	[6]59	(NA)	(NA)	[6]127	[6]166
Number of establishments	546	(NA)	123	480	(NA)	117	102	127	(NA)
Number of mines and quarries	567	111	135	502	79	129	106	145	155
Number of preparation plants	450	60	(NA)	427	51	(NA)	(NA)	(NA)	(NA)
Value of shipments[7]....$1,000..	[8]42,811	4,537	5,981	[8]36,310	3,444	5,631	2,737	1,359	927
Value added in mining....do....	[8]33,141	3,448	4,376	[8]27,926	2,517	4,117	2,044	1,057	745
Number of persons engaged, total	4,594	1,997	2,865	3,871	1,715	2,714	2,108	2,528	2,062
Production and development workers	3,784	1,787	2,585	3,162	1,529	2,455	1,890	2,243	[9]1,900
All other employees	263	178	[10]203	199	159	[10]184	128	109	162
Proprietors and firm members	547	32	77	510	27	75	90	176	(NA)
Performing manual labor	398	14	(NA)	378	13	(NA)	36	66	(NA)
Man-hours worked by production and development workers....1,000..	8,337	3,720	(NA)	6,919	3,150	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000..	21,712	2,532	4,412	18,555	2,123	4,174	2,382	1,298	919
Wages of production and development workers....do....	10,303	1,123	2,322	8,696	939	2,211	1,489	869	620
Salaries of all other employees....do....	1,339	320	[10]485	1,062	257	[10]449	200	127	117
Minerals received for preparation....do....	[8]218	(NA)	(NA)	[8]218	(NA)	(NA)	...	...	(NA)
Supplies....do....	[11]6,926	709	[12]1,168	5,993	633	[12]1,125	467	157	
Purchased fuel....do....	[11]1,076	181	[12]223	867	113	[12]194	213	107	173
Purchased electric energy....do....	[11]960	192	[12]213	866	174	[12]194	7		
Contract work....do....	[11]890	7	1	853	7	1	6	38	9
Purchased machinery installed....do....	[13]3,066		151	2,827		130	(NA)		
Capital expenditures, total....do....	[13]3,466	(NA)	(NA)	3,240	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do....	[13]222		234	222		234	35	(NA)	(NA)
Preparation plant construction....do....	[13]681	8		673	6				
Other construction....do....	[13]326		(NA)	325		(NA)	(NA)		
New machinery and equipment....do....	[13]2,093	124		1,891	88				
Used plant and equipment....do....	[13]144	36		129	36				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000..	[13]136	26	22	101	20	20	5	6	4
Per production worker	36	15	9	32	13	8	3	3	2
Prime movers....1,000..	[13]92	16	11	62	11	10	5	6	4
Electric motors driven by purchased energy....do....	[13]44	10	11	39	9	10	...	(14)	(14)
Horsepower rating of electric motors driven by energy generated at establishment....do....	[13]1	1	2	...	1	1	1	(14)	...
Energy used....million kwh equivalent..	[13]513	176	412	442	118	370	(NA)		
Coal....1,000 short tons..	[13]20	16	50	20	10	45	36		
Fuel oils....1,000 barrels..	[13]122	14	2	96	12	2	(14)	(NA)	(NA)
Gas....million cu.ft..	[13]13	...		...	...		...		
Electric energy purchased....million kwh..	[13]82	12	13	76	11	12	(NA)		
Electric energy generated and used....do....	[13]1	(14)	1	...	(14)	1	(NA)		

NA Not available.

[1]All figures except number of operating companies, number of establishments, and number of mines and quarries exclude data for one fire clay mine operated as part of a manufacturing plant.

[2]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing granite at such operations was $280,000; this value has been included in the value of shipments and value added in mining. The comparable values for sandstone and marble are not available.

[3]Excludes data for common clay and shale operations. There were 23 such mines in 1939 with products valued at $184,000.

[4]Excludes data for two nonproducing establishments.

[5]Includes data for lime plants producing lime valued at $2,000.

[6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[7]For clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[8]Excludes figures for the Uranium-radium-vanadium ores industry. No data on value of shipments and cost of ores received for milling were obtained for this industry for 1954.

[9]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[10]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[11]Figures for fuels, electric energy, and contract work for clay operations classified in manufactures are included with figure for supplies.

[12]Figures for purchased fuel and electric energy for nonproducing establishments are included with those for supplies.

[13]Excludes statistics for clay operations classified in manufactures.

[14]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	North Carolina, total		Metal mining			Nonmetallic minerals (except fuels) mining			
							Total		Dimension stone	
									Total	
		Including operations classified in manufactures[1]	Mineral industries only	Total	Tungsten ores	Other metal ores	Including operations classified in manufactures[1]	Mineral industries only	Including operations classified in manufactures	Mineral industries only
1	Number of operating companies	457	429	10	3	7	447	419	12	6
2	Number of establishments	546	513	10	3	7	536	503	13	7
	Number of mines and quarries:									
3	1954	567	534	10	3	7	557	524	13	7
4	1939	111	(NA)	2	...	2	107	(NA)	9	(NA)
5	Number of preparation plants	450	444	3	1	2	447	441	6	...
	Value of shipments:[2]									
6	1954, $1,000	42,811	39,566	[3]9,606	9,595	[3]11	33,205	29,960	2,001	156
7	1939[4], do	4,537	(NA)	([5])	...	([5])	[5]4,537	(NA)	[6]592	(NA)
8	Value added in mining, do	33,141	30,676	[3]8,910	8,904	[3]6	24,231	21,766	1,511	142
9	Number of persons engaged, total	4,594	4,103	536	519	17	4,058	3,567	400	56
10	Production and development workers	3,784	3,322	508	501	7	3,276	2,814	361	46
11	All other employees	263	240	18	16	2	[7]245	[7]222	26	3
12	Proprietors and firm members	547	541	10	2	8	537	531	13	7
13	Performing manual labor	398	396	6	2	4	392	390	6	4
	Man-hours worked by production and development workers:									
14	1954, 1,000	8,337	7,420	1,200	1,193	7	7,137	6,220	702	79
15	1939[4], do	3,720	(NA)	([5])	...	([5])	[5]3,720	(NA)	[6]296	(NA)
	At mines:									
16	Underground, do	1,404	1,404	995	989	6	409	409	...	...
17	Open-pit, do	2,661	2,270	...	...	...	2,661	2,270	175	78
18	Surface (mine shops, yards, etc.), do	1,156	799	92	91	1	1,064	707	357	...
19	At preparation plants, do	3,116	2,947	113	113	...	3,003	2,834	170	1
20	Man-hours spent on development and exploration work (included above), do	54	45	6	...	6	48	39	9	...
21	Principal expenses designated below, total, $1,000	21,712	19,661	3,034	2,927	107	18,678	16,627	1,600	143
22	Wages of production and development workers, do	10,303	9,192	2,105	2,096	9	[8]8,198	[7]7,087	915	94
23	Salaries of all other employees, do	1,339	1,179	130	121	9	[7]1,209	[7]1,049	168	8
24	Minerals received for preparation, do	218	218	1	...	1	217	217	...	...
25	Supplies, do	[8]6,926	6,198	490	484	6	[8]6,436	5,708	455	31
	Purchased fuel:									
26	Coal, do	[8]170	166	...	...	...	[8]170	166	4	...
27	Fuel oil, do	[8]625	621	15	15	...	[8]610	606	6	2
28	Gas, do	[8]9	9	...	...	...	[8]9	9	...	...
29	Other fuels, do	[8]272	266	12	12	...	[8]260	254	8	2
30	Purchased electric energy, do	[8]960	922	128	128	...	[8]832	794	43	5
31	Contract work, do	[8]890	890	153	71	82	[8]737	737	1	1
32	Purchased machinery installed, do	[9]3,066	3,021	454	453	1	[9]2,612	2,567	47	2
33	Capital expenditures, total, do	[9]3,466	3,421	557	472	85	[9]2,909	2,864	74	29
34	Development and exploration of mineral property, do	[9]222	222	85	...	85	[9]137	137	12	12
35	Preparation plant construction, do	[9]681	681	19	19	...	[9]662	662	...	...
36	Other construction, do	[9]326	326	...	...	...	[9]326	326	...	...
37	New machinery and equipment, do	[9]2,093	2,048	453	453	...	[9]1,640	1,595	53	8
38	Used plant and equipment, do	[9]144	144	...	...	...	[9]144	144	9	9
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total, 1,000	[9]136	131	6	6	([10])	[9]130	125	7	2
40	Per production worker	36	35	11	11	xxx	40	44	20	43
41	Prime movers, 1,000	[9]92	89	2	2	([10])	[9]90	87	4	1
42	Electric motors driven by purchased energy, do	[9]44	42	4	4	...	[9]40	38	3	1
43	Horsepower rating of electric motors driven by energy generated at establishment, do	[9]1	1	...	...	...	[9]1	1	...	...
44	Energy used, million kwh equivalent	[9]513	504	20	20	...	[9]493	484	9	([10])
45	Coal, 1,000 short tons	[9]20	20	([10])	([10])	...	[9]20	20	([10])	...
46	Fuel oil, 1,000 barrels	[9]122	121	2	2	...	[9]120	119	1	...
47	Gas, million cu.ft	[9]13	13	...	...	...	[9]13	13	...	...
48	Electric energy purchased, million kwh	[9]82	77	13	13	...	[9]69	64	5	...
49	Electric energy generated and used, do	[9]1	1	...	...	...	[9]1	[9]1	...	...
50	Water intake, including mine water used, million gallons	[9]8,596	8,581	598	598	...	[9]7,998	7,983	17	2
51	Per production worker, do	2.27	2.58	1.19	1.19	...	2.44	2.84	0.05	0.04

NA Not available. D Withheld to avoid approximately disclosing figures for individual companies. [1]See table 1, footnote 1. [2]See table 1, footnote 7. [3]See table 1, footnote 8. [4]See table 1, footnote 2. [5]Figures for Metal mining are included with those for Other nonmetallic minerals mining. [6]Figures for one natural abrasives mine and one dimension marble quarry are included with those for Dimension stone, n.e.c.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued												
Dimension stone—Con.		Crushed and broken stone			Sand and gravel	Feldspar	Clay, ceramic, and refractory minerals, n.e.c.		Mica	Talc, soapstone, and pyrophyllite	Other nonmetallic minerals mining	
Granite and Marble	Stone, n.e.c.	Limestone	Granite	Slate and Stone, n.e.c.			Including operations classified in manufactures	Mineral industries only				
7	5	10	12	3	23	15	28	7	335	6	7	1
8	5	10	19	3	34	28	33	7	379	8	9	2
8	5	10	19	3	34	37	33	7	393	8	7	3
8	1	3	21	2	9	17	23	(NA)	11	5	9	4
4	2	9	19	3	23	6	2	2	367	7	5	5
1,901	100	2,630	9,170	1,163	4,446	3,536	2,055	655	3,093	1,960	[5]3,151	6
[6]568	[6]24	127	1,796	107	629	292	184	(NA)	184	322	[5][6]304	7
1,426	85	2,044	6,432	770	3,606	2,079	1,609	513	2,548	1,425	2,207	8
373	27	219	715	66	514	312	209	62	995	231	397	9
344	17	207	666	60	420	279	202	55	521	204	356	10
24	2	7	37	5	60	8	4	4	35	23	[7]40	11
5	8	5	12	1	34	25	3	3	439	4	1	12
...	6	2	3	...	.19	15	1	1	346	...	...	13
670	32	418	1,696	153	995	542	423	129	905	448	855	14
[6]267	[6]29	183	1,419	117	375	353	195	(NA)	200	228	[5][6]354	15
...	...	...	...	...	...	56	...	...	234	119	...	16
163	12	156	958	47	273	143	386	92	190	85	248	17
356	1	30	79	73	16	1	...	...	18	16	474	18
151	19	232	659	33	706	342	37	37	463	228	133	19
9	...	...	...	...	...	4	...	...	26	6	3	20
1,532	68	1,142	4,882	609	2,253	2,169	904	310	1,610	1,184	2,325	21
872	43	525	1,995	188	1,163	637	444	154	904	507	920	22
159	9	43	295	28	262	49	15	15	58	132	[7]159	23
...	13	...	...	...	(NA)	1,105	...	...	297	393	...	24
442		452	2,131	191	524		[8]409	105			696	25
4	...	...	...	128	...	...	...	...	...	...	38	26
6	...	29	115	26	113	157	[8]22	22	78	14	50	27
...	...	...	...	...	9	...	...	...	...	...	...	28
7	1	33	55	8	57	15	[8]8	8	35	18	23	29
41	2	53	224	19	89	157	[8]5	5	98	37	107	30
1	...	7	67	21	36	49	[8]1	1	140	83	332	31
45	2	118	873	37	234	82		5	223	80	913	32
71	3	106	727	37	222	108		4	326	90	1,215	33
12	...	...	...	...	...	25		...	92	6	2	34
...	...	11	48	...	8	42		...	49	4	500	35
...	...	...	...	...	1	3		...	3	...	319	36
52	1	91	636	37	198	38		4	129	75	379	37
7	2	4	43	...	15	...		...	53	5	15	38
6	1	14	38	2	32	8		3	12	5	9	39
17	46	68	57	28	76	30		55	[11]	24	25	40
3	1	10	26	1	26	3		3	9	2	6	41
3	[10]	4	12	1	6	5	(NA)	[10]	3	3	3	42
...	...	...	[10]	...	[10]	...		1	[10]	...	...	43
9	[10]	21	66	137	62	72		9	43	13	61	44
[10]	...	...	...	16	...	...		...	...	...	4	45
1	...	5	21	6	22	32		4	16	3	10	46
...	...	...	...	...	13	...		...	...	...	...	47
5	...	4	16	2	6	14		...	7	3	12	48
...	...	...	...	...	...	...		1	...	...	...	49
17	...	388	1,098	10	2,048	1,224		102	(D)	(D)	(D)	50
0.05	...	1.87	1.65	0.17	4.88	4.39		1.85	(D)	(D)	(D)	51

[7]Includes data for central office employees in the Crude petroleum industry. [8]See table 1, footnote 11. [9]See table 1, footnote 13.
[10]See table 1, footnote 14. [11]Not computed since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
North Carolina, all mineral operations:									
Including operations in manufactures[1]	546	[2]42,811	[2]33,141	3,784	263	8,337	10,303	1,339	[3]3,322
Mineral industries only	513	[2]39,566	[2]30,676	3,322	240	7,420	9,193	1,179	3,277
Metal mining, total	10	[2]9,606	[2]8,910	508	18	1,200	2,105	130	557
Tungsten ores	3	9,595	8,904	501	16	1,193	2,096	121	472
Other metal ores	7	[2]11	[2]6	7	2	7	9	9	85
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures[1]	536	33,205	24,231	3,276	[4]245	7,137	8,198	[4]1,209	[3]2,765
Mineral industries only	503	29,960	21,766	2,814	[4]222	6,220	7,087	[4]1,049	2,720
Dimension Stone:									
Including operations in manufactures	13	2,001	1,511	361	26	702	915	168	65
Mineral industries only	7	156	142	46	3	79	94	8	20
Crushed and broken stone	32	12,963	9,246	933	49	2,267	2,708	366	823
Sand and gravel	34	4,446	3,606	420	60	995	1,163	262	207
Clay, ceramic, and refractory minerals:[5]									
Including operations in manufactures	61	5,591	3,688	481	12	965	1,081	64	[3]112
Mineral industries only	35	4,191	2,592	334	12	671	791	64	112
Other nonmetallic minerals mining	396	8,204	6,180	1,081	[4]98	2,208	2,331	[4]349	1,558
COUNTY									
Avery	50	761	554	176	5	359	316	20	64
Buncombe	15	846	698	60	15	136	175	71	135
Cabarrus (including operations in manufactures)	4	599	487	37	2	80	98	14	21
Cherokee (including operations in manufactures)	5	846	623	125	18	271	270	90	25
Cleveland	27	4,198	3,133	259	40	691	833	160	1,231
Cumberland (including operations in manufactures)	4	600	505	98	9	221	249	49	4
Guilford	4	1,684	1,280	140	11	352	416	88	185
Henderson (mineral industries only)	3	218	166	33	...	49	66	...	31
Jackson	17	[2]378	[2]333	62	4	111	158	21	25
Lee	4	430	372	16	...	38	39	...	(NA)
Macon (Nonmetallic minerals (except fuels) mining only)	29	402	363	89	10	134	144	37	17
Mitchell (Metal mining and Nonmetallic minerals (except fuels) mining)	166	[2]4,789	[2]3,066	469	9	859	946	55	165
Clay, ceramic, and refractory minerals	17	3,535	2,044	283	7	582	678	48	126
Moore	9	1,124	812	112	9	241	292	50	42
Rowan (including operations in manufactures)	8	1,179	960	99	5	215	251	23	49
Yancey	81	811	657	156	19	289	278	33	114

NA Not available.
[1]See table 1, footnote 1.
[2]See table 1, footnote 8.
[3]See table 1, footnote 13.
[4]See table 2, footnote 7.
[5]Represents the Feldspar and Clay, ceramic, and refractory minerals, n.e.c. industries only. Excludes data for one fire clay pit operated as part of a manufacturing plant and 4 Kaolin and ball clay mines.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All operations			Metal mining					Nonmetallic minerals (except fuels) mining				
									Dimension stone				
									Granite		Marble (included in manufactures)	Stone, n.e.c.	
	Total	Classified in mineral industries	Included in manufactures	Copper ores	Lead-zinc ores	Lode gold	Tungsten ores	Uranium-radium-vanadium ores	Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in manufactures
North Carolina, total	546	513	33	1	1	2	3	3	4	3	1	3	2
Alamance	3	2	1	...	...	...	...	...	...	...	...	...	...
Anson	3	3	...	...	...	...	...	...	...	...	...	...	...
Ashe	7	7	...	1	...	...	...	...	...	...	...	...	...
Avery	50	50	...	...	...	...	...	...	...	...	...	...	...
Buncombe	15	15	...	...	...	...	...	...	...	...	...	...	...
Burke	3	3	...	...	...	...	...	...	...	...	...	...	...
Cabarrus	4	3	1	...	...	...	...	...	...	...	...	...	1
Caldwell	4	4	...	...	...	...	...	...	...	...	...	...	...
Caswell	1	1	...	...	...	...	...	...	...	...	...	...	...
Catawba	3	3	...	...	...	...	...	...	...	...	...	...	...
Chatham	2	1	1	...	...	...	...	...	...	...	...	...	...
Cherokee	5	4	1	...	1	...	...	...	...	...	1	...	...
Clay	1	1	...	...	...	...	...	...	...	...	...	...	...
Cleveland	27	27	...	...	...	...	...	...	...	...	...	...	...
Cumberland	4	3	1	...	...	...	...	...	...	...	...	...	...
Davidson	4	4	...	...	...	...	...	...	...	...	...	1	...
Davie	1	1	...	...	...	...	...	...	...	...	...	...	...
Durham	2	1	1	...	...	...	...	...	...	...	...	...	...
Forsyth	5	5	...	...	...	...	...	...	...	...	...	...	...
Franklin	1	1	...	...	...	...	...	...	...	...	...	...	...
Gaston	3	2	1	...	...	...	...	...	...	...	...	...	...
Guilford	4	4	...	...	...	...	...	...	...	...	...	...	...
Halifax	3	2	1	...	...	2	...	...	...	...	...	...	...
Haywood	4	4	...	...	...	...	...	...	...	...	...	...	...
Henderson	5	3	2	...	...	...	...	...	...	...	...	...	...
Hoke	1	1	...	...	...	...	...	...	...	...	...	...	...
Iredell	2	1	1	...	...	...	...	...	...	...	...	...	...
Jackson	17	17	...	...	...	...	...	1	...	...	...	...	...
Jones	1	1	...	...	...	...	...	...	...	...	...	...	...
Lee	4	...	4	...	...	...	...	...	...	...	...	...	...
Lenoir	1	1	...	...	...	...	...	...	...	...	...	...	...
Lincoln	4	4	...	...	...	...	...	...	...	...	...	...	...
McDowell	8	7	1	...	...	...	...	...	...	...	...	...	...
Macon	29	29	...	...	...	...	...	...	...	...	...	...	...
Madison	1	1	...	...	...	...	...	...	...	...	...	...	...
Mitchell	166	166	...	...	...	...	...	1	...	...	...	...	...
Moore	9	9	...	...	...	...	...	...	...	...	...	...	...
Nash	1	...	1	...	...	...	...	...	...	...	...	...	...
New Hanover	1	1	...	...	...	...	...	...	...	...	...	...	...
Northampton	1	1	...	...	...	...	...	...	...	...	...	...	...
Onslow	1	1	...	...	...	...	...	...	...	...	...	...	...
Orange	1	1	...	...	...	...	...	...	...	...	...	...	...
Polk	1	1	...	...	...	...	...	...	1	...	...	...	...
Randolph	1	1	...	...	...	...	...	...	...	...	...	...	...
Rockingham	3	1	2	...	...	...	...	...	...	...	...	...	...
Rowan	8	5	3	...	...	...	...	...	3	2	...	...	1
Rutherford	5	4	1	...	...	...	...	1	...	...	...	...	...
Sampson	2	...	2	...	...	...	...	...	...	...	...	...	...
Stanley	3	1	2	...	...	...	...	...	...	...	...	...	...
Stokes	2	...	2	...	...	...	...	...	...	...	...	...	...
Surry	2	1	1	...	...	...	...	...	...	1	...	...	...
Swain	3	3	...	...	...	...	...	...	...	...	...	1	...
Transylvania	3	3	...	...	...	...	...	...	...	...	...	...	...
Union	4	2	2	...	...	...	...	...	...	...	...	...	...
Vance	4	4	...	...	...	...	3	...	...	...	...	...	...
Wake	3	3	...	...	...	...	...	...	...	...	...	1	...
Watauga	2	2	...	...	...	...	...	...	...	...	...	...	...
Wayne	1	1	...	...	...	...	...	...	...	...	...	...	...
Wilkes	3	2	1	...	...	...	...	...	...	...	...	...	...
Wilson	1	1	...	...	...	...	...	...	...	...	...	...	...
Yadkin	2	2	...	...	...	...	...	...	...	...	...	...	...
Yancey	81	81	...	...	...	...	...	...	...	...	...	...	...

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Nonmetallic minerals (except fuels) mining—Continued															
	Crushed and broken stone				Sand and gravel	Clay, ceramic, and refractory minerals					Chemical and fertilizer mineral mining, n.e.c.	Nonmetallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels)			
	Limestone	Granite	Slate	Stone, n.e.c.		Fire clay (included in manufactures)	Kaolin and ball clay	Feldspar	Clay, ceramic, and refractory minerals, n.e.c.				Mica	Talc, soapstone, and pyrophyllite	Vermiculite	Nonmetallic minerals, n.e.c.
									Classified in mineral industries	Included in manufactures						
North Carolina, total	10	19	1	2	34	1	3	28	7	26	1	1	379	8	1	2
Alamance	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...
Anson	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...
Ashe	...	...	...	...	...	...	...	1	...	...	...	...	5	...	...	...
Avery	...	...	...	...	...	...	2	...	...	...	...	...	48	...	...	...
Buncombe	1	...	...	...	5	...	...	1	...	...	...	...	8	...	...	...
Burke	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...
Cabarrus	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...
Caldwell	...	1	...	...	...	...	...	...	...	...	...	...	3	...	...	...
Caswell	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Catawba	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...
Chatham	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...
Cherokee	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...
Clay	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Cleveland	1	...	...	...	1	...	...	...	...	...	1	...	24	...	...	...
Cumberland	...	...	...	...	2	...	...	...	1	1	...	...	...	...	...	...
Davidson	...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Davie	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Durham	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...
Forsyth	...	2	...	...	3	...	...	...	...	...	...	...	...	...	...	...
Franklin	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Gaston	...	...	...	...	...	...	...	...	...	1	...	...	2	...	...	...
Guilford	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Halifax	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Haywood	...	...	...	...	1	...	...	...	...	...	...	...	3	...	...	...
Henderson	3	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...
Hoke	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Iredell	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...
Jackson	1	...	...	...	...	...	...	...	2	...	...	...	13	...	...	...
Jones	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lee	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...
Lenoir	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Lincoln	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...
McDowell	...	...	...	...	1	...	...	...	...	1	...	...	6	...	...	...
Macon	1	...	...	...	...	...	...	...	...	...	...	...	28	...	...	...
Madison	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Mitchell	...	...	...	...	...	...	1	15	1	...	...	...	147	...	...	1
Moore	...	...	...	...	7	...	...	...	...	...	...	...	...	2	...	...
Nash	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
New Hanover	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Northampton	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Onslow	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Orange	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Polk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Randolph	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Rockingham	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	...
Rowan	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rutherford	...	...	...	...	1	...	...	...	...	1	...	...	2	...	...	...
Sampson	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...
Stanley	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...
Stokes	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...
Surry	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Swain	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Transylvania	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1
Union	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...
Vance	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wake	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Watauga	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...
Wayne	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Wilkes	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...
Wilson	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yadkin	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yancey	...	...	...	...	...	...	...	8	...	...	...	...	72	...	1	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
North Carolina, all mineral operations:												
Including operations classified in manufactures	546	303	118	49	30	26	15	3	1	1	...	...
Mineral industries only	513	302	97	42	28	26	14	3	...	1	...	...
Metal mining, total	10	4	5	...	...	...	...	...	...	1	...	...
Copper ores	1	...	1	...	...	...	...	...	...	...	...	...
Lead-zinc (primarily zinc) ores	1	...	1	...	...	...	...	...	...	...	...	...
Lode gold	2	2	...	...	...	...	...	...	...	...	...	...
Tungsten ores	3	2	...	...	...	...	...	...	...	1	...	...
Uranium-radium-vanadium ores	3	...	3	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	536	299	113	49	30	26	15	3	1	...	...	...
Mineral industries only	503	298	92	42	28	26	14	3	...	...	...	...
Dimension stone:												
Granite:												
Classified in mineral industries	4	...	1	...	3	...	...	...	...	...	...	...
Included in manufactures	3	...	2	...	...	...	...	...	1	...	...	...
Marble (included in manufactures)	1	...	...	...	...	...	1	...	...	...	...	...
Stone, n.e.c:												
Classified in mineral industries	3	...	3	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	1	...	1	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	10	...	3	1	3	1	2	...	...	...	...	...
Granite	19	...	1	2	4	7	4	1	...	...	...	...
Slate	1	...	...	...	...	1	...	...	...	...	...	...
Stone, n.e.c	2	...	...	2	...	...	...	...	...	...	...	...
Sand and gravel	34	4	12	5	4	6	3	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay (included in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Kaolin and ball clay	3	...	...	...	...	1	2	...	...	...	...	...
Feldspar	28	6	9	8	2	2	...	1	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c:												
Classified in mineral industries	7	...	5	...	1	1	...	...	...	...	...	...
Included in manufactures	26	1	17	7	1	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	1	...	...	...	...	...	...	1	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	1	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Mica	379	286	55	22	10	5	1	...	...	...	...	...
Talc, soapstone, and pyrophyllite	8	2	1	1	...	2	2	...	...	...	...	...
Vermiculite	1	...	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c	2	...	...	1	1	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Million gallons per production worker[1]	Gallons per dollar value added	Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons): Used	Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
North Carolina, total	3,322	[2]30,676	7,305	2.20	238	6,195	1,276	943	11,390	17	62	2	19
Metal mining, total	508	[2]8,910	566	1.11	64	557	32	45	1,500	...	100	...	...
Tungsten ores	501	8,904	566	1.13	64	557	32	45	1,500	...	100	...	...
Other metal ores	7	[2]6	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	2,814	21,766	6,739	2.39	310	5,638	1,244	898	9,890	19	59	2	20
Dimension stone	46	142	2	0.04	14	2	...	...	2	100	...	...	...
Crushed and broken stone:													
Limestone	207	2,044	53	0.26	26	...	335	205	388	...	100	...	...
Granite	666	6,432	489	0.73	76	489	609	259	1,336	...	84	...	[3]16
Slate and Stone, n.e.c.	60	770	10	0.17	13	10	...	...	10	...	...	...	[3]100
Sand and gravel	420	3,606	1,846	4.40	512	1,846	202	...	2,577	...	100	...	...
Feldspar	279	2,079	1,211	4.34	582	1,139	13	21	1,224	12	88	...	...
Clay, ceramic, and refractory minerals, n.e.c.	55	513	102	1.85	199	96	...	...	102	...	100	...	...
Mica	521	2,548	3,026	2.80	490	2,056	85	238	1,495	...	55	20	[4]25
Talc, soapstone, and pyrophyllite	204	1,425					...	74	2,756	...	100	...	...
Other nonmetallic minerals mining	356	2,207					...	101		52	...	...	[3]48

[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]See table 1, footnote 8.
[3]Represents "Not specified."
[4]Includes 3 percent for "Not specified."

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NORTH DAKOTA

133-1

MINING IN NORTH DAKOTA: 1954

Rank among States:
Employment, 38
Value of shipments, 38

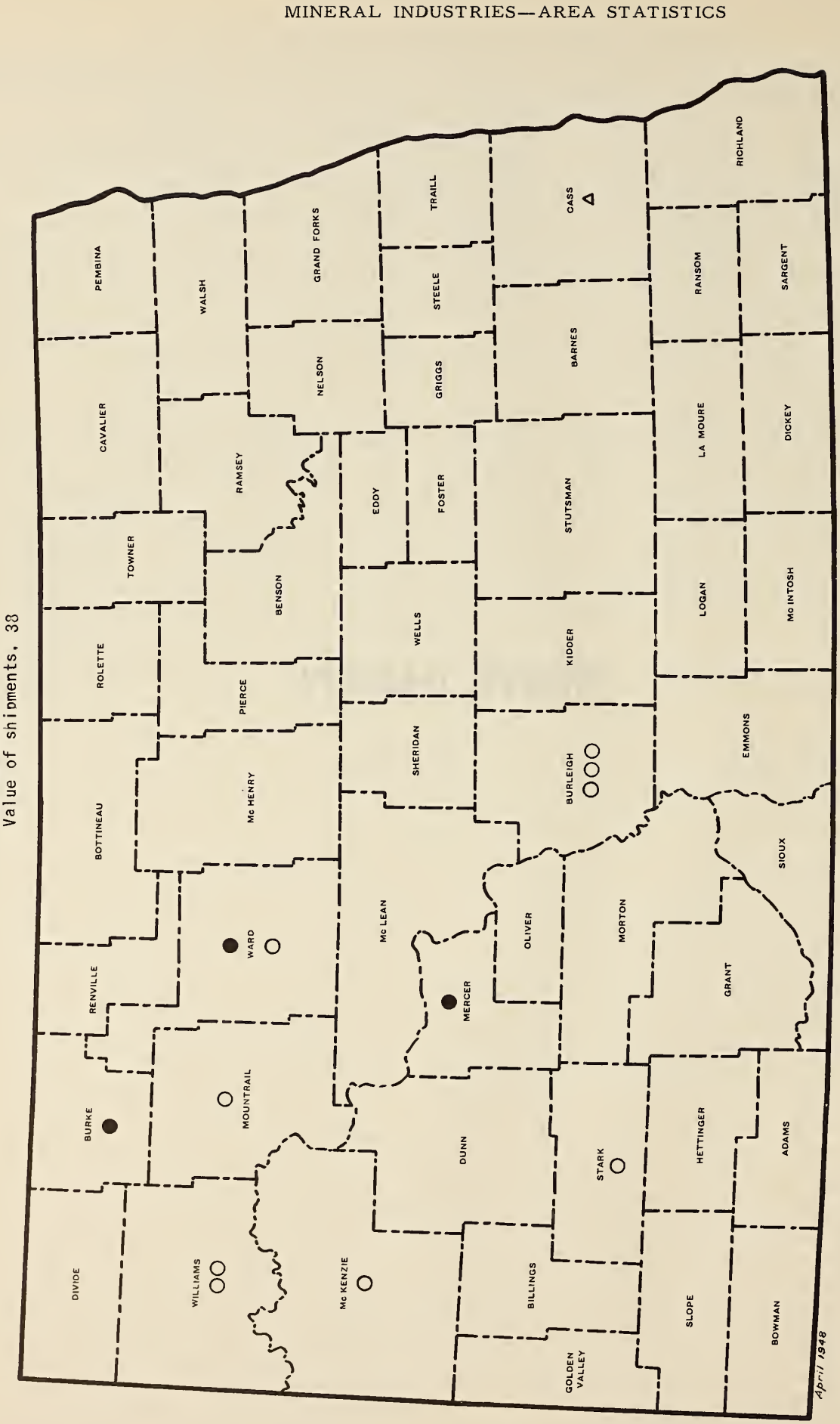


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes sand and gravel and contract service operations)

Item	1954[1]	1939[2]	1929[3]	1919	1909	1902[4]
Number of operating companies	138	105	(NA)	(NA)	53	48
Number of establishments	147	(NA)	115	79	53	(NA)
Number of mines and quarries	85	106	115	79	53	48
Number of oil and gas wells producing at end of year	472	...	(NA)	...	6	...
Number of preparation plants	29	4	(NA)	(NA)	(NA)	(NA)
Value of shipments[5]....$1,000	[6]28,694	2,503	3,207	1,927	565	335
Value added in mining....do	[6]7,151	2,027	2,732	1,574	456	243
Number of persons engaged, total	1,864	1,078	1,175	939	662	350
Production and development workers	1,399	874	994	774	562	[7]298
All other employees	399	86	[8]67	90	49	52
Proprietors and firm members	66	118	114	75	51	(NA)
Performing manual labor	29	97	(NA)	23	19	(NA)
Man-hours worked by production and development workers....1,000	2,956	1,724	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000	38,466	1,518	1,932	1,542	536	333
Wages of production and development workers....do	6,319	871	1,289	1,029	364	197
Salaries of all other employees....do	2,300	171	[8]168	160	63	44
Minerals received for preparation....do	[6]7,941	(NA)	(NA)	...	...	(NA)
Supplies....do		274	348	284	95	
Fuel[9]....do	1,320	73	50	33	13	89
Purchased electric energy....do	281	124	68	5		
Contract work....do	20,305	5	9	31	1	3
Purchased machinery installed....do	14,008		80	(NA)		
Capital expenditures, total....do	22,312	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do	5,335		65	94	(NA)	(NA)
Preparation plant construction....do	2,860	16				
Other construction....do	411		(NA)	(NA)		
New machinery and equipment....do	13,048	36				
Used plant and equipment....do	658	20				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	107	15	10	2	2	1
Per production worker	76	17	10	3	4	3
Prime movers....1,000	105	8	5	2	2	1
Electric motors driven by purchased energy....do	2	7	5	([10])	...	([10])
Horsepower rating of electric motors driven by energy generated at establishment....do	4	([10])	([10])	([10])	1	...
Energy used....million kwh equivalent	745	180	283	(NA)		
Coal[11]....1,000 short tons	7	21	34	16		
Fuel oils[11]....1,000 barrels	113	([10])	([10])	...	(NA)	(NA)
Gas[11]....million cu.ft	1,057	...	55	...		
Electric energy purchased....million kwh	14	5	2	(NA)		
Electric energy generated and used....do	([10])	([10])	([10])	(NA)		

NA Not available.

[1]Except for number of operating companies, number of establishments, and number of mines and quarries excludes data for one common clay pit operated as part of a manufacturing plant.

[2]Excludes data for one contract service establishment and one nonproducing establishment.

[3]Excludes data for one sand and gravel establishment.

[4]Includes data for one cement plant.

[5]For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. For all other years the figures represent net production and exclude this duplication.

[6]Excludes figures for the Uranium-radium-vanadium ores industry. No data on value of shipments and cost of ores received for milling were obtained for this industry for 1954.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees, if any, at central offices not included in reports for mining and mineral preparation establishments.

[9]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[10]Less than one-half of the unit of measure specified.

[11]Includes data for fuels produced and used at the same establishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION)

Item	North Dakota, total[1] (Mineral industries only)	Crude petroleum and natural gas extraction					Metal mining, Lignite mining, and Nonmetallic minerals (except fuels) mining
		Total	Crude petroleum and Natural gas	Drilling oil and gas wells contract services	Oil and gas field contract services, n.e.c.	Other industries	
Number of operating companies	137	59	32	8	18	3	78
Number of establishments	146	61	32	8	18	3	85
Number of mines, quarries, and producing oil and gas wells:							
1954	556	472	453	19	...	...	84
1939	106	...	...	...	...	...	106
Number of preparation plants	29	1	...	...	...	1	28
Value of shipments:[2]							
1954 ..... $1,000	[3]28,694	19,346	12,028	3,673	3,409	236	[3]9,348
1939[6] ..... do	2,503	...	...	...	...	...	2,503
Value added in mining ..... do	[3] [4]7,151	([5])	([5])	2,472	3,030	([4])	[3]7,226
Number of persons engaged, total	1,864	1,191	671	172	327	21	673
Production and development workers	1,399	823	374	149	284	16	576
All other employees	399	341	297	15	25	4	58
Proprietors and firm members	66	27	...	8	18	1	39
Performing manual labor	29	8	...	3	4	1	21
Man-hours worked by production and development workers:							
1954 1,000	2,956	1,900	803	384	685	28	1,056
1939[6] ..... do	1,724	(NA)	(NA)	...	...	...	1,724
At mines:							
Underground ..... do	21	...	...	...	...	...	21
Open-pit ..... do	563	...	...	...	...	...	563
Surface (mine shops, yards, etc.) ..... do	253	...	...	...	...	...	253
At preparation plants ..... do	247	28	...	...	...	28	219
At oil and gas field operations ..... do	1,872	1,872	803	384	685	...	...
Man-hours spent on development and exploration work (included above) ..... do	1,100	1,093	612	384	97	...	7
Principal expenses designated below, total ..$1,000	38,466	33,828	26,627	2,306	1,860	3,035	4,638
Wages of production and development workers ..... do	6,319	4,087	1,808	857	1,356	66	2,232
Salaries of all other employees ..... do	2,300	1,928	1,654	118	135	21	372
Minerals received for preparation ..... do	[3] [4]7,941	7,227	xxx	xxx	xxx	([4])	...
Supplies ..... do			5,864	1,094	178	49	714
Purchased fuel:							
Coal ..... do	2	...	...	...	...	...	2
Fuel oils ..... do	307	86	43	16	27	...	221
Gas ..... do	39	14	6	2	6	...	25
Other fuels ..... do	972	788	573	60	155	...	184
Purchased electric energy ..... do	281	31	28	...	3	...	250
Contract work ..... do	20,305	19,667	16,651	159	...	2,857	638
Purchased machinery installed ..... do	14,008	13,480	8,335	155	(D)	(D)	528
Capital expenditures, total ..... do	22,312	21,872	13,765	285	(D)	(D)	440
Development and exploration of mineral property ..... do	5,335	5,322	5,206	116	...	...	13
Preparation plant construction ..... do	2,860	3,265	xxx	xxx	xxx	(D)	(D)
Other construction ..... do	411		281	(D)	...	(D)	(D)
New machinery and equipment ..... do	13,048	12,750	7,761	(D)	(D)	(D)	298
Used plant and equipment ..... do	658	535	517	...	(D)	(D)	123
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	107	85	31	12	22	20	22
Per production worker	76	103	83	81	77	1,250	38
Prime movers 1,000	105	85	31	12	22	20	20
Electric motors driven by purchased energy ..... do	2	([7])	([7])	...	...	...	2
Horsepower rating of electric motors driven by energy generated at establishment ..... do	4	2	([7])	...	...	2	2
Energy used ..... million kwh equivalent	745	600	490	31	79	...	145
Produced and used for fuel:							
Coal ..... 1,000 short tons	7	...	...	...	...	...	7
Crude petroleum ..... 1,000 barrels	49	49	49	...	...	...	...
Natural gas ..... million cu. ft	623	623	618	5	...	...	...
Purchased fuels:							
Coal ..... 1,000 short tons	([7])	...	...	...	...	...	([7])
Fuel oil ..... 1,000 barrels	64	15	9	2	4	...	49
Gas ..... million cu. ft	434	322	183	33	106	...	112
Electric energy purchased ..... million kwh	14	1	1	...	([7])	...	13
Electric energy generated and used ..... do	([7])	([7])	([7])	...	...	...	...
Water intake, including mine water used ..... million gallons	1,227	292	140	138	13	1	935
Per production worker ..... do	0.88	0.35	0.37	0.93	0.05	0.06	1.62

D Witheld to avoid approximately disclosing figures for individual companies. NA Not available. xxx Not applicable. [1]In addition, 1 common clay pit operated as part of a manufacturing plant was reported. [2]See table 1, footnote 5. [3]See table 1, footnote 6. [4]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown for these industries. [5]Value added is not shown since the combined cost of supplies, gas purchased for gas lift and repressuring, fuel, purchased electric energy, contract work, and purchased machinery installed exceeds the sum of the value of shipments and capital expenditures. [6]See table 1, footnote 2. [7]See table 1, footnote 10.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN NORTH DAKOTA COUNTIES, BY INDUSTRY GROUPS: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
North Dakota (Mineral industries only)	146	28,694	[1]7,151	1,399	399	2,956	6,319	2,300	21,654
Crude petroleum and natural gas extraction, total	61	19,346	([2])	823	341	1,900	4,087	1,928	21,337
Crude petroleum and natural gas[3]	32	12,028	([2])	374	297	803	1,808	1,654	13,248
Natural gas liquids and Oil and gas field contract services[4]	29	7,318	([1])	449	44	1,097	2,279	274	8,089
Metal mining, Lignite mining, and Nonmetallic minerals (except fuels) mining	85	9,348	7,226	576	58	1,056	2,232	372	317
COUNTY									
Burke	5	(NA)	(NA)	[5]74	([5])	(NA)	(NA)	(NA)	(NA)
Burleigh, total	18	(NA)	(NA)	[5]268	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	15	(NA)	(NA)	[5]250	([5])	(NA)	(NA)	(NA)	(NA)
Lignite mining, and Sand and gravel	3	248	151	[5]18	([5])	40	[5]63	([5])	(D)
Cass	4	504	383	58	2	116	195	6	1
McKenzie	7	(NA)	(NA)	[5]51	([5])	(NA)	(NA)	(NA)	(NA)
McLean	5	1,029	767	43	6	89	167	32	22
Mercer	5	2,198	1,865	116	17	169	505	138	83
Morton	10	277	182	25	2	53	73	4	12
Mountrail	7	(NA)	(NA)	[5]44	([5])	(NA)	(NA)	(NA)	(NA)
Stark, total	8	(NA)	(NA)	[5]45	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	3	(NA)	(NA)	[5]30	([5])	(NA)	(NA)	(NA)	(NA)
Lignite and Sand and gravel	5	282	198	[5]15	([5])	32	[5]43	([5])	33
Ward, total	9	(NA)	(NA)	[5]136	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	3	(NA)	(NA)	[5]40	([5])	(NA)	(NA)	(NA)	(NA)
Lignite and Sand and gravel	6	1,537	1,254	86	10	150	333	68	38
Williams, total	19	(NA)	(NA)	[5]204	([5])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[6]	10	(NA)	(NA)	[5]176	([5])	(NA)	(NA)	(NA)	(NA)
Lignite, Natural gas liquids, and Sand and gravel	9	316	227	[5]28	([5])	48	[5]109	([5])	7,678

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.

[1]See table 2, footnote 4.

[2]See table 2, footnote 5.

[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.

[4]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for such companies is included with the county data for the Crude petroleum and Natural gas industries.

[5]Figures for "All other employees" are included with those for "Production and development workers."

[6]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All operations			Metal mining (Uranium-radium-vanadium ores)	Lignite mining		Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining			
										Sand and gravel		Clay, ceramic, and refractory minerals, n.e.c.	
	Total	Classified in mineral industries	Included in manufactures		Lignite	Lignite mining contract services	Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Common sand and gravel	Glass sand	Classified in mineral industries	Included in manufactures
North Dakota, total	[1]147	[1]146	1	1	44	1	[1]32	1	28	36	1	2	1
Adams	1	1	...	...	1	...	...	...		...	...	...	...
Benson	1	1	...	...	...	...	...	...		1	...	...	...
Billings	2	2	...	1	...	...	1	...		...	...	...	...
Bottineau	2	2	...	...	...	...	2	...		...	...	...	...
Bowman	2	2	...	...	1	...	1	...		...	...	...	...
Burke	5	5	...	...	2	...	1	...		2	...	...	...
Burleigh	18	18	...	...	1	1	15	...		1	...	...	...
Cass	4	4	...	...	...	...	...	...		4	...	...	...
Dickey	1	1	...	...	...	...	...	...		1	...	...	...
Divide	1	1	...	...	1	...	...	...		...	...	...	...
Dunn	3	3	...	...	3	...	...	...		...	...	...	...
Eddy	1	1	...	...	...	...	...	...		1	...	...	...
Foster	1	1	...	...	...	...	1	...		...	...	...	...
Golden Valley	1	1	...	...	...	...	1	...		...	...	...	...
Grand Forks	2	2	...	...	...	...	...	...		2	...	...	...
Grant	6	6	...	...	4	...	...	...		1	1	...	...
Hettinger	2	2	...	...	2	...	...	...		...	...	...	...
McHenry	1	1	...	...	...	...	...	...		1	...	...	...
McIntosh	1	1	...	...	...	...	...	...	(NA)	1	...	...	...
McKenzie	7	7	...	...	1	...	6	...		...	...	...	...
McLean	5	5	...	...	3	...	...	...		2	...	...	...
Mercer	5	5	...	...	5	...	...	...		...	...	...	...
Morton	11	10	1	...	7	...	...	...		1	...	2	1
Mountrail	7	7	...	...	...	...	6	...		1	...	...	...
Nelson	2	2	...	...	...	...	...	...		2	...	...	...
Oliver	1	1	...	...	1	...	...	...		...	...	...	...
Pierce	2	2	...	...	...	...	...	...		2	...	...	...
Ramsey	2	2	...	...	...	...	1	...		1	...	...	...
Renville	1	1	...	...	...	...	...	...		1	...	...	...
Rolette	1	1	...	...	...	...	1	...		...	...	...	...
Sioux	1	1	...	...	...	...	1	...		...	...	...	...
Stark	8	8	...	...	3	...	3	...		2	...	...	...
Stutsman	4	4	...	...	...	...	1	...		3	...	...	...
Traill	1	1	...	...	...	...	...	...		1	...	...	...
Ward	9	9	...	...	5	...	3	...		1	...	...	...
Wells	1	1	...	...	...	...	1	...		...	...	...	...
Williams	19	19	...	...	4	...	10	1		4	...	...	...

NA Not available.
[1]See table 3, footnote 3, and for county figures, see table 3, footnote 6.
[2]See table 3, footnote 4.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
North Dakota, all mineral operations:												
Including operations classified in manufactures	147	19	57	26	19	19	5	2	...	...	...	...
Mineral industries only	146	18	57	26	19	19	5	2	...	...	...	...
Metal mining (Uranium-radium-vanadium ores)	1	...	1	...	...	...	...	...	...	...	...	...
Lignite mining, total	45	6	22	9	1	4	3	...	...	...	...	...
Lignite	44	6	22	8	1	4	3	...	...	...	...	...
Lignite mining contract services	1	...	...	1	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	61	4	17	12	12	12	2	2	...	...	...	...
Crude petroleum and natural gas	32	4	5	5	9	7	1	1	...	...	...	...
Natural gas liquids	1	...	...	...	1	...	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	8	...	1	2	1	4	...	...	...	...	...	...
Building, repairing, and dismantling rigs and derricks	2	...	2	...	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	18	...	9	5	1	1	1	1	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures	40	9	17	5	6	3	...	...	...	...	...	...
Mineral industries only	39	8	17	5	6	3	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	36	8	15	5	5	3	...	...	...	...	...	...
Glass sand	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	2	...	1	...	1	...	...	...	...	...	...	...
Included in manufactures	1	1	...	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
North Dakota, total	1,399	[2]7,151	883	0.63	123	585	344	...	1,296	...	47	21	32
Crude petroleum and natural gas extraction, total	823	([3])	292	0.35	(NA)	15	xxx	xxx	[4]292	...	1	49	50
Crude petroleum and natural gas	374	([3])	140	0.37	(NA)	7	xxx	xxx	(NA)	...	2	94	[5]4
Drilling oil and gas wells contract services	149	2,472	138	0.93	56	8	xxx	xxx	(NA)	...	...	9	[5]91
Oil and gas field contract services, n.e.c.	284	3,030	13	0.05	4	...	xxx	xxx	(NA)	...	...	...	100
Other industries	16	(NA)	1	0.06	(NA)	...	xxx	xxx	(NA)	...	100	...	...
Metal mining, Lignite mining, and Nonmetallic minerals (except fuels) mining	576	[6]7,226	591	1.03	88	570	344	...	1,004	...	70	7	[7]23

xxx Not applicable.
NA Not available.
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]See table 1, footnote 6, and table 2, footnote 4.
[3]See table 2, footnote 5.
[4]For industries other than Natural gas liquids, includes water intake only.
[5]Represents "not specified."
[6]See table 1, footnote 6.
[7]Includes "not specified", 7 percent.

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OHIO

134-1

MINING IN OHIO: 1954

OHIO

Rank among States:
Employment, 9
Value of shipments, 15

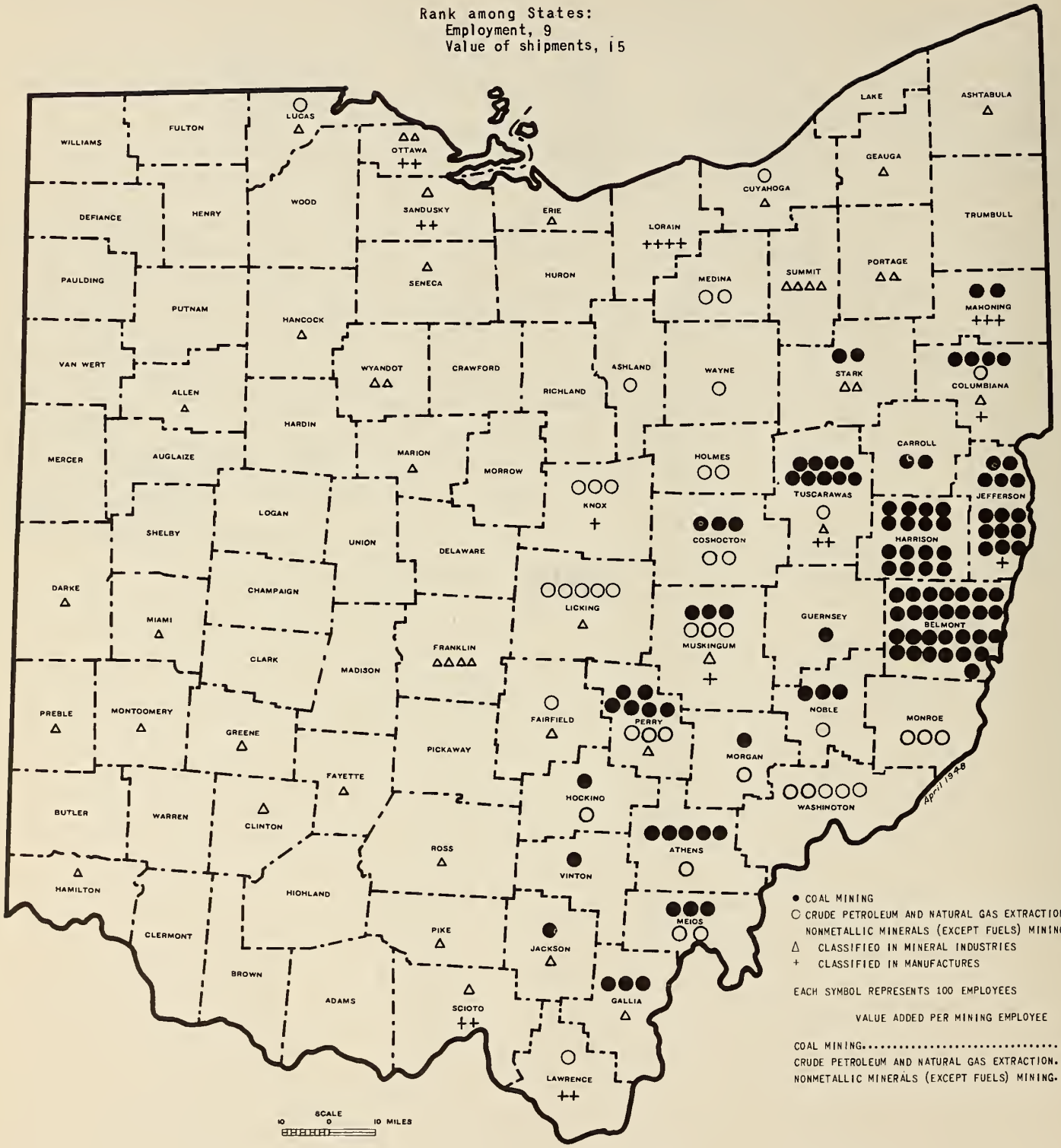


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations		Comparative statistics excluding sand, gravel, common clay, and shale operations, and stone quarries operated as part of cement and lime plants					Comparative statistics excluding the crude petroleum and natural gas extraction industries, common clay and shale, & contract services operations		
	1954	1939[1]	1954[2]	1939[3]	1919	1909	1902[4]	1954	1939[5]	1929[6]
Number of operating companies	1,639	1,239	1,321	[7]1,065	(NA)	[7]1,885	[7]11,339	915	[7]908	(NA)
Number of establishments	1,793	(NA)	1,409	(NA)	2,289	1,952	(NA)	1,035	(NA)	801
Number of mines and quarries	1,146	1,106	760	848	1,065	966	1,103	1,064	1,014	864
Number of oil and gas wells producing at end of year	13,563	15,011	13,562	15,011	35,440	35,067	40,333	xxx	xxx	xxx
Number of preparation plants	419	336	168	178	(NA)	(NA)	(NA)	415	310	(NA)
Value of shipments[8]....$1,000	249,145	64,230	207,029	52,900	134,519	63,767	56,472	221,936	52,222	60,096
Value added in mining....do	184,097	51,914	149,603	43,189	106,964	47,112	38,188	163,760	42,049	49,521
Number of persons engaged, total	25,669	28,495	19,741	25,361	56,916	56,268	39,577	20,052	24,723	28,846
Production and development workers	19,510	24,948	14,207	22,178	49,470	50,571	[9]37,002	16,694	22,217	27,001
All other employees	4,232	2,395	3,848	2,121	4,137	2,628	2,575	2,455	1,614	[10]1,252
Proprietors and firm members	1,927	1,152	1,686	1,062	3,309	3,069	(NA)	903	892	593
Performing manual labor	945	723	803	690	509	571	(NA)	624	614	(NA)
Man-hours worked by production and development workers....1,000	37,247	41,312	31,303	37,491	(NA)	(NA)	(NA)	37,608	36,603	(NA)
Principal expenses designated below, total....$1,000	168,826	46,168	148,929	39,692	93,931	46,201	43,901	139,437	39,269	45,117
Wages of production and development workers....do	74,881	28,749	64,199	25,515	58,320	26,771	23,118	67,061	25,526	31,351
Salaries of all other employees....do	23,958	5,103	22,113	4,466	8,056	2,775	2,499	14,608	3,570	[10]3,191
Minerals received for preparation....do	10,735	(NA)	10,735	(NA)	[11]3,093	[11]5,376	(NA)	10,721	(NA)	(NA)
Supplies....do	37,178	7,055	32,102	5,598	16,376	7,380	9,923	31,599	6,332	6,971
Fuel[12]....do	6,133	1,737	5,051	1,215	2,951	893	5,647	5,683	1,310	1,057
Purchased electric energy....do	4,692	2,051	3,854	1,503	1,190			4,617	1,998	2,378
Contract work....do	11,249	1,473	10,875	1,395	3,945	3,006	2,714	5,148	533	169
Purchased machinery installed....do	19,844		15,930		(NA)			16,239		2,202
Capital expenditures, total....do	24,783	(NA)	21,121	(NA)	(NA)			15,831	(NA)	(NA)
Development and exploration of mineral property....do	4,878		4,660		8,440	(NA)	(NA)	611		321
Preparation plant construction....do	2,222	483	1,672	[13]443				2,222	377	
Other construction....do	851		745		(NA)			724		(NA)
New machinery and equipment....do	13,808	3,248	11,570	[13]2,901				9,768	2,581	
Used plant and equipment....do	3,024	869	2,474	[13]681				2,506	741	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	1,052	367	866	[13]299	338	295	211	922	287	228
Per production worker	54	15	61	13	7	6	6	55	13	8
Prime movers....1,000	765	205	638	[13]170	273	292	211	640	128	84
Electric motors driven by purchased energy....do	287	162	228	[13]129	65	3	[14]	282	159	144
Horsepower rating of electric motors driven by energy generated at establishment....do	17	34	15	[13]30	41	37	6	17	32	17
Energy used....million kwh equivalent	2,790	2,715	2,384	[13]2,360	(NA)			2,410	2,004	3,010
Coal[15]....1,000 short tons	50	218	46	[13]184	863			41	211	381
Fuel oils[15]....1,000 barrels	681	103	593	[13]94	1	(NA)	(NA)	664	103	22
Gas[15]....million cu.ft	1,068	1,871	953	[13]1,862	5,441			276	102	20
Electric energy purchased....million kwh	324	119	282	[13]100	(NA)			320	117	125
Electric energy generated and used....do	14	29	14	[13]27	(NA)			14	28	8

xxx Not applicable. NA Not available. [1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing sandstone at such operations was $159,000; this value has been included in the value of shipments and value added in mining. The comparable value for limestone is not available. [2]Excludes data for one nonproducing crushed and broken stone, n.e.c. quarry. [3]Includes data for 2 glass sand pits. See also footnote 1. [4]Includes data for lime plants producing lime valued at $1,082,000. [5]Represents producing operations only. See also footnote 1. [6]Represents producing operations only. Excludes data for one nonproducing establishment. [7]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry. [8]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication. [9]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period. [10]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments. [11]Includes natural gas purchased for resale. [12]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat. [13]Includes data for 21 stone quarries operated as part of cement and lime plants. [14]Less than one-half of the unit of measure specified. [15]Includes data for fuels produced and used at the same establishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Ohio, total		Bituminous coal mining			Crude petroleum and natural gas extraction					
		Including operations classified in manufactures	Mineral industries only	Total	Bituminous coal	Bituminous coal mining contract services	Total	Crude petroleum	Natural gas	Drilling oil and gas wells contract services	Oil and gas field contract services, n.e.c.	Natural gas liquids and Building, repairing, and dismantling rigs and derricks
1	Number of operating companies	1,639	1,531	500	485	17	646	383	133	111	24	4
2	Number of establishments	1,793	1,654	534	517	17	659	387	133	111	24	4
	Number of mines, quarries, and producing oil and gas wells:											
3	1954	14,709	14,570	550	550	xxx	13,563	9,237	3,998	327	1	...
4	1939	16,117	(NA)	658	658	xxx	15,011	(NA)	(NA)	(NA)	(NA)	(NA)
5	Number of preparation plants	419	411	26	26	xxx	2	xxx	xxx	xxx	xxx	2
	Value of shipments:[3]											
6	1954 ..$1,000..	249,145	228,046	131,136	130,254	882	23,041	8,685	7,980	5,878	388	110
7	1939 ..do....	64,230	(NA)	33,556	33,342	[4]214	10,426	[5]9,422	([5])	529	81	394
8	Value added in mining ..do....	184,097	166,825	90,727	90,164	563	[6]17,459	5,645	6,883	4,537	317	[6]77
9	Number of persons engaged, total	[13]25,669	[13]23,575	11,809	11,713	96	5,191	3,301	856	925	93	16
10	Production and development workers	19,510	17,508	10,079	10,015	64	2,433	1,076	538	742	64	13
11	All other employees	4,232	4,146	1,120	1,117	3	1,770	1,604	131	30	4	1
12	Proprietors and firm members	1,927	1,921	610	581	29	988	621	187	153	25	2
13	Performing manual labor	945	942	460	440	20	296	146	48	92	10	...
	Man-hours worked by production and development workers:											
14	1954 ..1,000..	37,247	33,242	18,021	17,910	111	4,024	1,668	848	1,383	100	25
15	1939 ..do....	41,312	(NA)	26,966	[7]26,840	[4]126	3,487	[5]3,031	([5])	248	34	174
	At mines:											
16	Underground ..do....	8,450	8,450	7,951	7,951	...	xxx	xxx	xxx	xxx	xxx	xxx
17	Open-pit ..do....	13,285	10,220	6,022	5,917	105	xxx	xxx	xxx	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.) ..do....	[9]5,609	[9]5,584	4,048	4,042	6	xxx	xxx	xxx	xxx	xxx	xxx
19	At preparation plants ..do....	[9]5,889	[9]4,974			...	10	xxx	xxx	xxx	xxx	10
20	At oil and gas field operations	4,014	4,014	...	...	...	4,014	1,668	848	1,383	100	15
21	Man-hours spent on development and exploration work (included above) ..do....	4,613	4,611	13	13	xxx	1,702	195	135	1,334	23	15
22	Principal expenses designated below, total ..$1,000..	168,826	157,151	87,223	86,674	549	[6]26,578	17,608	4,592	4,060	234	[6]84
23	Wages of production and development workers ..do....	74,881	67,573	41,407	41,181	226	6,316	2,291	1,520	2,313	144	48
24	Salaries of all other employees ..do....	23,958	23,503	6,600	6,594	6	9,328	8,641	581	89	14	3
25	Minerals received for preparation ..do....	10,735	10,735	10,314	10,314	xxx	[6]4,469	xxx	xxx	xxx	xxx	[6]26
26	Supplies ..do....	[10]37,178	33,405	19,139	18,942	197		2,323	756	1,313	51	
	Purchased fuel:											
27	Coal ..do....	[10]238	196	33	33	...	2	...	...	2	...	...
28	Fuel oil ..do....	[10]3,247	3,238	2,300	2,251	49	23	3	6	14	...	...
29	Gas-natural and manufactured ..do....	[10]257	257	20	20	...	90	9	17	57	...	7
30	Other fuels ..do....	[10]2,391	2,362	1,057	1,035	22	235	103	11	103	18	...
31	Purchased electric energy ..do....	[10]4,692	4,633	2,314	2,314	...	71	57	10	4	...	...
32	Contract work ..do....	[10]11,249	11,249	4,039	3,990	49	6,044	4,181	1,691	165	7	...
33	Purchased machinery installed ..do....	[12]19,844	19,722	8,746	8,720	26	3,541	2,463	478	584	16	...
34	Capital expenditures, total ..do....	[12]24,783	24,576	7,553	7,529	24	8,893	6,099	1,872	901	21	...
35	Development and exploration of mineral property ..do....	[12]4,878	4,874	90	90	xxx	4,265	2,820	1,245	199	1	...
36	Preparation plant construction ..do....	[12]2,222	2,221	645	645	xxx	...	xxx	xxx	...	...	...
37	Other construction ..do....	[12]851	761	292	292	...	126	70	24	32	...	...
38	New machinery and equipment ..do....	[12]13,808	13,708	5,025	5,001	24	3,992	2,789	585	606	12	...
39	Used plant and equipment ..do....	[12]3,024	3,012	1,501	1,501	...	510	420	18	64	8	...
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total ..1,000..	[12]1,052	1,043	506	496	10	116	69	12	32	3	([11])
41	Per production worker	54	60	50	50	156	48	64	22	43	47	xxx
42	Prime movers ..1,000..	[12]765	763	378	368	10	111	65	11	32	3	([11])
43	Electric motors driven by purchased energy ..do....	[12]287	280	128	128	...	5	4	1	...	...	...
44	Horsepower rating of electric motors driven by energy generated at establishment ..do....	17	17	7	7	...	([11])	([11])	...	...	...	...
45	Energy used ..million kwh equivalent..	[12]2,790	2,677	1,331	1,310	21	316	122	71	101	4	18
	Produced and used for fuel at same establishment:											
46	Coal ..1,000 short tons..	[12]11	11	2	2	xxx	xxx	xxx	xxx	xxx	xxx	xxx
47	Crude petroleum ..1,000 barrels..	[12]1	1	xxx	xxx	xxx	1	1	...	...	...	...
48	Natural gas ..million cu. ft..	[12]453	453	xxx	xxx	xxx	453	264	160	...	...	29
	Purchased fuels:											
49	Coal ..1,000 short tons..	[12]39	26	2	2	...	([11])	...	...	([11])	...	...
50	Fuel oil ..1,000 barrels..	[12]680	679	479	470	9	5	1	1	3	...	...
51	Gas-natural and manufactured ..million cu. ft..	[12]615	615	61	61	...	339	25	56	229	...	29
52	Electric energy purchased ..million kwh..	[12]324	321	197	197	...	4	4	([11])	([11])	...	...
53	Electric energy generated and used ..do....	[12]14	14	4	4	...	([11])	([11])	...	...	...	...
54	Water intake, including mine water used ..million gallons..	[12]31,580	31,259	892	892	...	296	270	...	23	...	3
55	Per production worker ..do....	1.61	1.79	0.09	0.09	...	0.12	0.25	...	0.03	...	0.23

NA Not available. xxx Not applicable. [1]Includes data for 2 dimension limestone quarries. Man-hours exclude data for 2 nonproducing crushed and broken limestone quarries. For man-hours see also footnote 7. [2]The figures for "Natural abrasive stones and Gypsum" include data for one establishment in the Native asphalt and bituminous industry. Value of shipments and man-hours also include data for 2 glass sand mines and for 2 peat mines. [3]See table 1, footnote 8. [4]Figures for Nonmetallic minerals (except fuels) contract services are included with those for Bituminous coal mining contract services. [5]Figures for the Natural gas industry are included with those for the Crude petroleum industry. For man-hours see also footnote 7. [6]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry

AND INDUSTRY: 1954 AND SELECTED COMPARATIVE STATISTICS: 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining																
Total		Dimension sandstone		Crushed and broken stone			Sand and gravel		Clay, ceramic, and refractory minerals				Non-metallic minerals (except fuels) contract services	Peat	Natural abrasive stones and Gypsum (including operations in manufactures)	
				All stone					Fire clay		Clay, ceramic, and refractory minerals, n.e.c.					
Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures	Limestone (mineral industries only)	Sandstone	Common sand and gravel	Glass sand and Foundry sand	Including operations in manufactures	Mineral industries only	Including operations in manufactures	Mineral industries only				
503	392	9	4	103	84	4	238	15	66	28	72	9	3	12	4	1
600	461	15	9	127	102	4	262	19	76	38	82	9	3	12	4	2
596	457	15	9	125	100	4	265	18	76	38	82	9	xxx	12	3	3
448	(NA)	7	(NA)	[1]145	(NA)	...	130	21	46	(NA)	88	(NA)	xxx	2	[2]9	4
391	383	6	...	104	99	4	232	16	16	16	2	2	xxx	12	3	5
94,968	73,869	4,702	328	45,989	33,603	2,061	27,566	1,493	10,803	7,503	2,732	232	554	391	738	6
20,248	(NA)	688	(NA)	[1]9,127	(NA)	...	6,143	[2]402	1,176	(NA)	1,368	(NA)	([4])	([2])	[21],344	7
75,911	58,639	4,166	285	36,126	26,056	1,442	22,753	1,091	8,618	6,103	2,022	203	293	294	548	8
8,310	6,216	808	29	3,694	2,968	129	2,287	215	812	443	295	25	35	61	103	9
6,998	4,996	715	28	3,176	2,469	111	1,709	175	758	389	289	19	30	43	103	10
983	897	87	1	461	442	18	352	31	41	41	...	...	4	7	...	11
329	323	6	...	57	57	...	226	9	13	13	6	6	1	11	...	12
189	186	3	...	28	28	...	133	4	6	6	5	5	...	10	...	13
15,202	11,197	1,483	64	7,088	5,695	245	3,908	311	1,485	747	577	37	60	86	204	14
10,859	(NA)	359	(NA)	[1]5,114	(NA)	...	2,470	[2]253	846	(NA)	1,097	(NA)	([4])	([2])	[2]720	15
499	499	...	...	408	408	...	11	...	80	80	...	...	...	...	...	16
7,263	4,198	543	64	3,082	1,855	81	[8]1,639	125	1,008	270	573	33	60	46	187	17
1,561	1,536	25	...	1,460	1,460	...	(NA)	(NA)	76	76	...	...	...	...	...	18
5,879	4,964	915	...	2,138	1,972	164	2,258	186	321	321	4	4	...	40	17	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
2,898	2,896	2	...	1,974	1,972	2	853	...	7	7	2	2	60	...	...	21
52,286	40,611	3,543	143	26,346	21,142	1,203	13,102	977	5,271	3,167	1,817	92	445	237	548	22
27,158	19,850	2,458	91	12,939	10,213	434	6,823	457	2,735	1,416	1,110	66	168	110	358	23
5,291	4,836	456	1	2,676	2,527	147	1,740	103	270	270	...	...	16	30	...	24
[10]13,991	10,218	...	...	[10]8,149	6,072	...	...	...	...	...	...	...	xxx	...	...	25
		475	36			371	[2]2,459	[2]225	2,266	758	707	5	241	31	[10]182	26
[10]203	161	42	...	[10]107	79	28	15	3		4		1	...	29	[10]2	27
[10]924	915	9	...	[10]409	393	16	381	15		80		5	6	19	...	28
[10]147	147	...	...	[10]62	17	45	5	40		40		...	...	...	...	29
[10]1,099	1,070	36	7	[10]424	416	7	572	41		...		3	14	5	[10]4	30
[10]2,307	2,248	59	...	[10]1,283	1,188	95	764	70		116		4	...	11	...	31
[10]1,166	1,166	8	8	[10]297	237	60	343	23		483		8	([11])	2	[10]2	32
[12]7,557	7,435	127	5	[12]3,178	3,129	49	3,700	184		313		30	8	17	...	33
[12]8,337	8,130	220	13	[12]4,046	3,984	52	3,426	199		394		27	8	17	...	34
[12]523	519	4	...	[12]309	299	...	206	...		2		2	...	...	...	35
[12]1,577	1,576	9	8	[12]939	935	4	522	28		79		...	...	...	...	36
[12]433	343	90	...	[12]232	231	1	105	...		5		1	...	...	...	37
[12]4,791	4,691	105	5	[12]2,124	2,086	38	2,043	171		308		24	8	16	...	38
[12]1,013	1,001	12	...	[12]442	433	9	550	...		...		...		1	...	39
[12]430	421	11	2	[12]203	195	8	176	8		26		2	2	2	([11])	40
61	84	15	71	64	79	72	103	46		66		105	67	47	xxx	41
[12]276	274	4	2	[12]123	120	3	120	5		18		2	2	2	([11])	42
[12]154	147	7	([11])	[12]80	75	5	56	3	(NA)	8	(NA)	([11])	...	([11])	...	43
[12]10	10	...	...	[12]8	8	...	2	...		...		([11])	...	...	...	44
[12]1,143	1,030	114	2	[12]497	425	72	353	41		89		2	4	42	1	45
[12]9	9	...	...	[12]5	5	...	xxx	xxx		4		...	xxx	xxx	xxx	46
xxx	xxx	...	...	xxx	xxx	xxx	xxx	xxx		xxx		xxx	xxx	xxx	xxx	47
xxx	xxx	...	...	xxx	xxx	xxx	xxx	xxx		xxx		xxx	xxx	xxx	xxx	48
[12]35	22	13	...	[12]15	10	5	2	([11])		1		([5])	...	4	([11])	49
[12]196	195	1	...	[12]82	78	4	84	3		19		1	1	5	...	50
[12]215	215	...	...	[12]100	21	79	44	71		...		...	...	...	...	51
[12]123	120	3	...	[12]69	68	11	38	4		8		([11])	...	1	...	52
[12]10	10	...	...	[12]10	10	...	...	...		...		...	...	...	...	53
[12]30,392	30,071	322	1	[12]2,272	1,790	482	27,409	334		51		4	...	...	...	54
4.34	6.02	0.45	0.04	0.71	0.72	4.34	16.04	1.91		0.13		0.21	...	...	...	55

group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. [7]Man-hours for 2 nonproducing bituminous coal mines and for 2 nonproducing crushed and broken limestone quarries are included with those for the Crude petroleum and Natural gas industries. [8]Includes man-hours worked on floating equipment. [9]For Bituminous coal, man-hours at "Preparation plant" are included with man-hours at "Surface." [10]Figures for fuels, electric energy, and contract work for crushed stone, clay, and gypsum operations classified in manufactures are included with figures for supplies. [11]Less than one-half of the unit of measure specified. [12]Excludes statistics for crushed stone and clay operations classified in manufactures. [13]Includes data for Central Office employees for establishments classified in Metal Mining Industries.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Ohio, all mineral operations:									
Including operations in manufactures	1,793	249,145	184,097	19,510	4,232	37,247	74,881	23,958	[2]21,759
Mineral industries only:									
Including crude petroleum and natural gas extraction	1,654	228,046	166,825	17,508	4,146	33,242	67,573	23,503	21,564
Excluding crude petroleum and natural gas extraction	995	205,005	149,366	15,075	2,017	29,218	61,257	11,436	13,181
Bituminous coal mining	534	131,136	90,727	10,079	1,120	18,021	41,407	6,600	6,052
Crude petroleum and natural gas extraction, total	659	23,041	[3]17,459	2,433	1,770	4,024	6,316	9,328	8,383
Crude petroleum and natural gas[4]	520	16,665	12,528	1,614	1,735	2,516	3,811	9,222	7,533
Natural gas liquids and Oil and gas field contract services[5]	139	6,376	[3]4,931	819	35	1,508	2,505	106	850
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	600	94,968	75,911	6,998	983	15,202	27,158	5,291	[2]7,324
Mineral industries only	461	73,869	58,639	4,996	897	11,197	19,850	4,836	7,129
Dimension stone:									
Including operations in manufactures	15	4,702	4,166	715	87	1,483	2,458	456	208
Mineral industries only	9	328	285	28	1	64	91	1	5
Crushed and broken stone (including operations in manufactures)	127	45,989	36,126	5,710	461	7,088	12,939	2,676	[2]3,604
Sand and gravel	281	29,059	23,844	1,884	383	4,219	7,280	1,843	3,075
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	158	13,535	10,640	1,047	41	2,062	3,845	270	(NA)
Mineral industries only	47	7,735	6,306	408	41	784	1,482	270	421
Nonmetallic minerals (except fuels) contract services	3	554	293	30	4	60	168	16	...
Natural abrasives, except sand, and Miscellaneous nonmetallic minerals, n.e.c. (including operations in manufactures)	16	1,129	842	146	7	290	468	30	[2]16
COUNTY									
Allen	6	[6]964	[6]695	61	9	[6]147	[6]238	[6]32	[6]189
Ashland	24	(NA)	(NA)	[7]64	(7)	(NA)	(NA)	(NA)	(NA)
Ashtabula	6	760	349	55	12	103	191	55	52
Athens, total	59	(NA)	(NA)	[7]544	(7)	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	21	(NA)	(NA)	[7]53	(7)	(NA)	(NA)	(NA)	(NA)
Bituminous coal	33	4,095	2,422	452	17	630	1,408	56	36
Nonmetallic minerals (except fuels) mining	5	198	140	21	1	39	51	2	25
Auglaize	11	(NA)	(NA)	[7]39	(7)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	7	430	363	35	6	88	134	28	66
Belmont (mineral industries only)	69	(NA)	(NA)	[7]2,678	(7)	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	60	24,601	18,557	2,654	232	4,381	10,704	1,473	1,329
Butler	7	[6]578	[6]460	43	4	[6]95	[6]148	[6]29	[6]21
Carroll (mineral industries only)	20	(NA)	(NA)	[7]216	(7)	(NA)	(NA)	(NA)	(NA)
Bituminous coal	11	1,248	1,078	177	13	307	518	72	75
Nonmetallic minerals (except fuels) mining	4	451	328	21	...	42	80	...	...
Clark	7	398	337	39	6	87	114	27	23
Columbiana (including operations in manufactures), total	61	(NA)	(NA)	[7]546	(7)	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	41	6,085	3,101	342	47	791	1,391	226	464
Crude petroleum and natural gas[8]	8	(NA)	(NA)	[7]30	(7)	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.--GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954--Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY--Continued									
Columbiana (including operations in manufactures)--Continued									
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	12	1,614	1,106	122	5	238	427	28	[2]16
Mineral industries only	7	1,134	812	49	5	92	168	28	16
Coshocton (mineral industries only), total	80	(NA)	(NA)	[7]493	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	29	3,170	2,535	298	22	599	1,134	80	292
Crude petroleum and natural gas[8]	40	(NA)	(NA)	[7]133	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	11	330	304	40	...	79	111	...	21
Cuyahoga (mineral industries only), total	37	(NA)	(NA)	[7]543	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas extraction[8]	19	(NA)	(NA)	[7]56	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	18	2,271	1,504	81	38	164	407	165	71
Sand and gravel	15	2,174	1,423	72	36	144	359	159	45
Darke (mineral industries only)	8	(NA)	(NA)	[7]85	([7])	(NA)	(NA)	(NA)	(NA)
Delaware (mineral industries only)	5	613	484	42	5	109	148	20	150
Erie (mineral industries only)	5	2,261	2,507	118	21	282	661	163	1,080
Fairfield, total	23	(NA)	(NA)	[7]101	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	[8]16	(NA)	(NA)	[7]29	([7])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	7	351	303	66	6	120	169	13	12
Fayette	3	659	616	64	28	183	247	159	191
Franklin (mineral industries only)	8	4,762	3,895	359	21	924	1,678	168	356
Gallia	24	(NA)	(NA)	[7]318	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	19	3,072	1,951	234	19	492	901	91	171
Nonmetallic minerals (except fuels) mining	3	467	364	[7]43	([7])	108	[7]143	([7])	39
Geauga	6	1,175	942	54	74	136	203	464	...
Greene (mineral industries only)	6	186	124	28	...	44	78	...	50
Guernsey	22	(NA)	(NA)	[7]170	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	13	1,356	853	126	9	264	491	30	9
Hamilton	12	4,533	4,083	165	161	401	750	1,115	361
Hancock	12	(NA)	(NA)	[7]1,161	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	4	762	503	52	56	122	199	341	85
Hardin	5	(NA)	(NA)	[7]46	([7])	(NA)	(NA)	(NA)	(NA)
Harrison (mineral industries only), total	29	(NA)	(NA)	[7]1,623	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	21	32,704	18,549	1,452	126	2,375	6,238	799	375
Crude petroleum and natural gas[8]	4	(NA)	(NA)	[7]8	([7])	(NA)	(NA)	(NA)	(NA)
Other mineral industries	4	737	379	32	5	62	183	18	2
Highland (mineral industries only)	4	492	286	30	7	81	99	28	73
Hocking (mineral industries only), total	41	(NA)	(NA)	[7]143	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	15	442	332	53	4	92	179	22	2
Crude petroleum and natural gas[8]	22	(NA)	(NA)	[7]64	([7])	(NA)	(NA)	(NA)	(NA)
Other mineral industries	4	319	222	[7]22	([7])	47	[7]67	([7])	24
Holmes (including operations in manufactures), total	39	(NA)	(NA)	[7]130	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal and Nonmetallic minerals (except fuels) mining (mineral industries only)	9	269	213	33	14	56	103	128	31
Crude petroleum and natural gas[8]	27	(NA)	(NA)	[7]94	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	3	556	470	[7]31	([7])	63	[7]109	([7])	8
Huron (mineral industries only)	5	168	122	15	...	23	45	...	1
Jackson (mineral industries only)	23	[6]2,616	[6]2,207	198	27	[6]340	[6]681	[6]122	[6]170
Bituminous coal	16	1,905	1,605	131	14	226	501	46	127
Jefferson (including operations in manufactures), total	59	(NA)	(NA)	[7]1,516	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	44	16,272	12,408	1,303	118	2,413	5,705	767	736
Crude petroleum and natural gas[8]	5	(NA)	(NA)	[7]8	([7])	(NA)	(NA)	(NA)	(NA)
Other mineral industries	4	116	89	18	...	33	61	...	...
Clay operations in manufactures	6	450	339	69	...	138	258	...	(NA)

See footnotes at end of table.

Table 3.--GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY--Continued									
Knox, total	45	(NA)	(NA)	[7]217	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	38	(NA)	(NA)	[7]136	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	7	913	632	63	18	146	221	80	217
Lake (mineral industries only)	7	222	233	12	2	27	46	9	35
Lawrence (including industries only), total	21	[6]1,933	[6]1,419	[7]167	([7])	[6]284	[6]396	[6]74	[2] [6]106
Bituminous coal	12	1,441	1,016	78	34	194	280	65	92
Other mineral industries	9	[6]492	[6]402	[7]55	([7])	[6]90	[6]116	9	14
Licking (mineral industries only), total	48	(NA)	(NA)	[7]310	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	40	(NA)	(NA)	[7]245	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	8	690	529	59	6	132	205	24	24
Logan, total	8	356	272	33	8	75	116	23	30
Crushed and broken stone	4	248	182	22	3	59	74	12	20
Sand and gravel	4	108	90	11	5	16	42	11	10
Lorain (mineral industries only)	8	(NA)	(NA)	[7]31	([7])	(NA)	(NA)	(NA)	(NA)
Lucas (mineral industries only)	8	[6]2,097	[6]1,588	[7]456	([7])	[6]252	[6]493	[6]1,526	[6]21
Mahoning (mineral industries only), total	19	5,506	4,394	363	84	762	1,610	568	353
Bituminous coal	14	2,499	1,856	127	23	305	684	126	27
Nonmetallic minerals (except fuels) mining	5	3,007	2,538	236	61	457	926	442	326
Marion (mineral industries only)	4	1,073	791	60	5	144	256	40	55
Medina (mineral industries only)	22	(NA)	(NA)	[7]146	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	19	(NA)	(NA)	[7]119	([7])	(NA)	(NA)	(NA)	(NA)
Meigs	43	(NA)	(NA)	[7]386	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	18	2,610	2,200	254	12	505	811	46	722
Mercer	7	(NA)	(NA)	[7]49	([7])	(NA)	(NA)	(NA)	(NA)
Miami	6	1,466	964	104	19	218	399	120	78
Monroe	76	(NA)	(NA)	[7]185	([7])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	72	(NA)	(NA)	[7]143	([7])	(NA)	(NA)	(NA)	(NA)
Montgomery	19	2,020	1,589	151	24	345	627	103	591
Morgan, total	30	(NA)	(NA)	[7]162	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	5	3,118	2,482	77	11	167	526	63	257
Crude petroleum and natural gas[8]	22	(NA)	(NA)	[7]55	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	3	214	187	18	1	34	77	4	42
Muskingum (mineral industries only), total	77	(NA)	(NA)	[7]516	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	33	2,875	2,373	267	17	471	1,038	94	225
Crude petroleum and natural gas[8]	37	(NA)	(NA)	[7]153	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	7	947	681	65	14	150	253	65	87
Noble (mineral industries only)	36	(NA)	(NA)	[7]317	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	8	3,375	2,088	230	38	419	1,069	198	107
Ottawa (mineral industries only)	3	(NA)	(NA)	[7]219	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (including operations in manufactures)	5	7,261	6,570	[7]369	([7])	726	[7]1,519	([7])	(NA)
Perry, total:									
Including operations in manufactures	97	(NA)	(NA)	[7]1,773	([7])	(NA)	(NA)	(NA)	(NA)
Mineral industries only	92	(NA)	(NA)	[7]1,752	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	33	7,045	5,541	571	38	903	2,529	214	230
Crude petroleum and natural gas[8]	55	(NA)	(NA)	[7]149	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (including operations in manufactures)	9	1,777	1,203	123	16	250	442	136	[2]40
Pike	7	1,661	1,552	[7]167	([7])	224	[7]556	([7])	410
Portage	20	(NA)	(NA)	[7]200	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	17	3,080	2,574	150	15	290	583	62	150

See footnotes at end of table.

Table 3.--GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY--Continued									
Preble	4	232	127	48	8	103	150	27	14
Putnam (mineral industries only)	5	[6]324	[6]224	29	6	53	99	[6]27	[6]3
Richland (mineral industries only)	6	174	160	18	...	36	61	...	11
Ross	6	1,003	745	75	14	177	297	71	46
Sandusky:									
Including operations in manufactures	16	(NA)	(NA)	[7]243	(7)	(NA)	(NA)	(NA)	(NA)
Mineral industries only	10	(NA)	(NA)	[7]65	(7)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (including operations in manufactures)	9	4,350	3,895	232	6	480	941	41	[2]33
Scioto (mineral industries only)	7	570	437	70	3	114	197	22	33
Seneca (mineral industries only)	6	(NA)	(NA)	[7]71	(7)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (including operations in manufactures)	6	1,812	1,385	103	10	221	400	57	(NA)
Shelby	4	371	309	23	3	49	97	19	4
Stark:									
Including operations in manufactures	58	(NA)	(NA)	[7]490	(7)	(NA)	(NA)	(NA)	(NA)
Mineral industries only	50	(NA)	(NA)	[7]441	(7)	(NA)	(NA)	(NA)	(NA)
Bituminous coal	16	2,920	1,736	221	29	508	1,002	186	155
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	33	4,002	3,417	200	22	424	867	85	(NA)
Mineral industries only	25	3,247	2,760	151	22	327	679	85	408
Sand and gravel	13	1,181	945	68	17	147	306	65	137
Clay, ceramic, and refractory minerals (mineral industries only)	6	1,906	1,678	68	3	148	309	1	270
Summit (mineral industries only)	22	(NA)	(NA)	[7]390	(7)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (mineral industries only)	16	3,615	2,683	348	29	718	1,538	177	301
Tuscarawas:									
Including operations in manufactures	121	(NA)	(NA)	[7]1,238	(7)	(NA)	(NA)	(NA)	(NA)
Mineral industries only	92	(NA)	(NA)	[7]1,015	(7)	(NA)	(NA)	(NA)	(NA)
Bituminous coal	66	8,317	6,564	819	82	1,610	3,531	454	223
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	46	3,336	2,635	[7]310	(7)	612	[7]837	(7)	[2]90
Mineral industries only	17	1,317	1,106	[7]87	(7)	167	[7]347	(7)	90
Sand and gravel	10	802	681	51	4	109	191	9	90
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	36	2,534	1,954	[7]253	(7)	503	[7]637	(7)	(NA)
Mineral industries only	7	515	425	[7]30	(7)	58	[7]147	(7)	...
Vinton (mineral industries only)	21	(NA)	(NA)	[7]140	(7)	(NA)	(NA)	(NA)	(NA)
Bituminous coal	14	763	604	106	3	157	317	9	37
Washington, total	124	(NA)	(NA)	[7]208	(7)	(NA)	(NA)	(NA)	(NA)
Bituminous coal and Nonmetallic minerals (except fuels) mining	6	478	371	[7]52	(7)	102	[7]195	(7)	...
Crude petroleum and natural gas[8]	118	(NA)	(NA)	[7]228	(7)	(NA)	(NA)	(NA)	(NA)
Wayne (mineral industries only), total	17	(NA)	(NA)	[7]108	(7)	(NA)	(NA)	(NA)	(NA)
Bituminous coal and Nonmetallic minerals (except fuels) mining	6	573	452	59	3	144	232	12	190
Crude petroleum and natural gas[8]	11	(NA)	(NA)	[7]46	(7)	(NA)	(NA)	(NA)	(NA)
Williams (mineral industries only)	6	347	275	14	2	30	50	5	17
Wood (mineral industries only)	15	(NA)	(NA)	[7]57	(7)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	4	529	396	46	8	121	171	32	55
Wyandot (mineral industries only)	12	(NA)	(NA)	[7]253	(7)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	7	2,494	1,850	224	24	521	760	119	190

NA Not available. [1]See table 1, footnote 8. [2]See table 2, footnote 12. [3]See table 2, footnote 6.

[4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.

[5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.

[6]Excludes data for one Crude petroleum or Natural gas establishment.

[7]Figures for "All other employees" are included with those for "Production and development workers."

[8]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for any establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	State and county	All mineral operations			Bituminous coal mining		Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining (Dimension sandstone)	
		Total	Classified in mineral industries	Included in manufactures	Bituminous coal	Bituminous coal mining contract services	Crude petroleum and Natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Classified in mineral industries	Included in manufactures
1	Ohio, total	1,793	1,654	139	517	17	520	2	137	9	6
2	Adams	1	1	...	...	...	...	...		...	...
3	Allen	6	6	...	...	...	1	...		...	...
4	Ashland	24	24	...	...	...	21	...		...	...
5	Ashtabula	6	6	...	...	...	...	...		...	...
6	Athens	59	59	...	33	...	21	...		...	...
7	Auglaize	11	11	...	...	...	4	...		2	...
8	Belmont	70	69	1	54	6	7	...		...	...
9	Brown	1	1	...	...	...	...	...		...	...
10	Butler	7	7	...	...	...	1	...		...	...
11	Carroll	22	20	2	11	1	4	...		...	...
12	Champaign	1	1	...	...	...	...	...		...	...
13	Clark	7	7	...	...	...	...	...		...	...
14	Clermont	1	1	...	...	...	...	...		...	...
15	Clinton	2	2	...	...	...	...	...		...	...
16	Columbiana	61	56	5	37	4	8	...		...	...
17	Coshocton	81	80	1	29	...	40	...		2	1
18	Crawford	2	2	...	...	...	...	...		...	...
19	Cuyahoga	40	37	3	...	...	18	1		...	...
20	Darke	9	7	2	...	...	1	...		...	...
21	Delaware	7	5	2	...	...	...	...		...	...
22	Erie	8	5	3	...	...	...	...		...	...
23	Fairfield	23	23	...	...	...	16	...		...	...
24	Fayette	3	3	...	...	...	...	...		...	...
25	Franklin	10	8	2	...	...	...	...		...	...
26	Gallia	24	24	...	19	...	2	...		...	...
27	Geauga	6	6	...	...	...	...	...		...	...
28	Greene	10	6	4	...	...	...	...		...	...
29	Guernsey	22	22	...	13	1	7	...		...	...
30	Hamilton	12	12	...	...	...	...	...		...	...
31	Hancock	12	12	...	...	...	8	...		...	...
32	Hardin	5	5	...	...	...	2	...		...	...
33	Harrison	30	29	1	21	1	4	...		1	...
34	Henry	3	2	1	...	...	...	...		...	...
35	Highland	5	4	1	...	...	...	...		...	...
36	Hocking	43	41	2	15	1	22	...	(NA)	...	...
37	Holmes	39	36	3	3	...	27	...		1	1
38	Huron	6	5	1	...	...	...	...		...	...
39	Jackson	25	23	2	16	...	1	...		...	...
40	Jefferson	59	53	6	44	2	5	...		...	...
41	Knox	45	45	...	...	...	38	...		1	...
42	Lake	9	7	2	...	...	...	...		...	...
43	Lawrence	27	21	6	12	1	1	...		...	...
44	Licking	49	48	1	...	...	40	...		...	...
45	Logan	8	8	...	...	...	...	...		...	...
46	Lorain	10	8	2	...	...	6	...		...	2
47	Lucas	10	8	2	...	...	1	...		...	...
48	Madison	3	2	1	...	...	...	...		...	...
49	Mahoning	20	19	1	14	...	...	...		...	...
50	Marion	6	4	2	...	...	...	...		...	...
51	Medina	24	22	2	...	...	19	1		...	...
52	Meigs	44	44	...	18	...	25	...		...	...
53	Mercer	7	7	...	...	...	5	...		...	...
54	Miami	6	6	...	...	...	...	...		...	...
55	Monroe	76	76	...	...	...	72	...		1	...
56	Montgomery	19	19	...	...	...	...	...		...	...
57	Morgan	30	30	...	5	...	22	...		...	...
58	Marrow	1	1	...	...	...	...	...		...	...
59	Muskingum	79	77	2	33	...	37	...		...	...
60	Noble	37	36	1	8	...	26	...		...	...
61	Ottawa	7	3	4	...	...	2	...		...	...
62	Paulding	6	3	3	...	...	...	...		...	...
63	Perry	97	92	5	33	...	55	...		...	...
64	Pickaway	1	1	...	...	...	...	...		...	...
65	Pike	7	7	...	...	...	...	...		...	...
66	Portage	20	20	...	1	...	2	...		...	...
67	Preble	4	4	...	...	...	...	...		...	...
68	Putman	8	5	3	...	...	1	...		...	...
69	Richland	8	6	2	...	...	...	...		1	...
70	Ross	6	6	...	...	...	...	...		...	...
71	Sandusky	16	10	6	...	...	7	...		...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued															
Crushed and broken stone				Sand and gravel			Clay, ceramic, and refractory minerals						Miscellaneous nonmetallic minerals (except fuels)		
Limestone							Fire clay		Clay, ceramic, and refractory minerals, n.e.c.		Natural abrasive stones	Nonmetallic minerals (except fuels) contract services			
Classified in mineral industries	Included in manufactures	Sandstone	Stone, n.e.c.	Common sand and gravel	Glass sand	Foundry sand	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures			Gypsum (included in manufactures)	Peat	
102	20	4	1	262	1	18	38	38	9	73	2	3	2	12	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
4	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	4
1	...	...	...	4	...	1	...	...	...	...	...	...	...	...	5
3	...	...	...	2	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	4	...	...	...	...	...	...	...	...	...	1	7
2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	8
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	5	...	1	...	...	...	...	...	...	...	...	10
1	...	...	...	...	...	...	3	1	...	1	...	...	...	...	11
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	12
1	...	...	...	6	...	...	...	...	...	...	...	...	...	...	13
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	15
...	...	...	...	2	...	...	4	3	1	2	...	...	...	...	16
...	...	...	...	7	...	2	...	...	...	...	...	...	...	...	17
1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	18
1	...	1	...	15	...	...	...	...	1	3	...	...	...	...	19
...	...	...	...	6	...	...	...	...	...	2	...	...	...	...	20
4	1	...	...	...	...	...	...	1	1	...	...	...	...	...	21
3	1	...	...	1	...	1	...	...	...	2	...	...	...	...	22
...	...	...	...	5	...	2	...	...	...	...	...	...	...	...	23
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24
2	...	...	...	6	...	...	...	...	...	2	...	...	...	...	25
1	...	...	...	1	...	1	...	...	...	...	...	...	...	...	26
...	...	...	...	5	...	1	...	...	...	...	...	...	...	...	27
...	2	...	...	6	...	...	...	...	...	2	...	...	...	...	28
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29
...	...	...	...	11	...	...	1	...	...	...	...	...	...	...	30
3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	31
2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	32
1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	33
...	...	...	...	1	...	...	...	...	1	1	...	...	...	...	34
3	...	...	...	1	...	...	...	...	...	1	...	...	...	...	35
...	...	...	...	2	...	...	1	1	...	1	...	...	...	...	36
2	1	...	...	3	...	...	...	...	...	1	...	...	...	...	37
...	...	...	...	2	...	2	...	...	...	1	...	...	...	1	38
1	...	...	...	1	...	...	4	2	...	...	...	...	...	...	39
...	...	...	...	1	...	...	1	5	...	1	...	...	...	...	40
...	...	...	...	5	1	...	...	...	...	...	...	...	...	...	41
...	...	...	...	7	...	...	...	...	...	2	...	...	...	...	42
2	2	...	...	1	...	...	4	...	...	4	...	...	...	...	43
1	...	...	...	7	...	...	...	...	...	1	...	...	...	...	44
4	...	...	...	4	...	...	...	...	...	...	...	...	...	...	45
...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	46
4	1	...	...	3	...	...	...	...	...	1	...	...	...	...	47
...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	48
1	...	...	...	1	...	...	2	...	...	1	...	...	...	1	49
3	...	...	...	1	...	...	...	...	...	2	...	...	...	...	50
...	...	...	...	2	...	...	...	...	...	2	...	...	...	...	51
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	52
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	53
1	...	...	...	5	...	...	...	...	...	...	...	...	...	...	54
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	55
2	...	...	...	17	...	...	...	...	...	...	...	...	...	...	56
1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	57
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	58
2	1	...	...	2	...	1	...	...	2	1	...	...	...	...	59
2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	60
1	2	...	...	...	...	...	...	...	...	...	...	...	2	...	61
2	...	...	1	...	...	...	...	...	...	3	...	...	...	...	62
1	...	1	...	...	...	1	1	2	...	3	...	...	...	...	63
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	64
1	...	...	...	6	...	...	...	...	...	...	...	...	...	...	65
...	...	1	...	13	...	2	...	...	...	...	...	...	...	1	66
1	...	...	...	3	...	...	...	...	...	...	...	...	...	...	67
4	...	...	...	...	...	...	...	...	...	3	...	...	...	...	68
1	...	...	...	3	...	...	...	...	...	2	...	...	...	1	69
...	...	...	...	5	...	1	...	...	...	...	...	...	...	...	70
2	6	...	...	1	...	...	...	...	...	...	...	...	...	...	71

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	State and county	All mineral operations			Bituminous coal mining		Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining (Dimension sandstone)	
		Total	Classified in mineral industries	Included in manufactures	Bituminous coal	Bituminous coal mining contract services	Crude petroleum and Natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Classified in mineral industries	Included in manufactures
	Ohio--Continued										
1	Scioto	9	7	2	...	...	...	...		...	2
2	Seneca	8	6	2	...	...	2	...		...	...
3	Shelby	4	4	...	...	...	...	...		...	...
4	Stark	58	50	8	16	...	9	...		...	...
5	Summit	23	22	1	...	...	6	...		...	...
6	Trumbull	2	1	1	...	...	...	...		...	...
7	Tuscarawas	121	92	29	66	...	9	...		...	...
8	Union	2	2	...	...	...	...	...	(NA)	...	...
9	Van Wert	4	3	1	...	...	...	...		...	...
10	Vinton	22	21	1	14	...	5	...		...	...
11	Warren	4	4	...	...	...	...	...		...	...
12	Washington	124	124	...	1	...	118	...		...	...
13	Wayne	19	17	2	1	...	11	...		...	...
14	Williams	7	6	1	...	...	...	...		...	...
15	Wood	18	15	3	...	...	11	...		...	...
16	Wyandot	13	12	1	...	...	5	...		...	...

NA Not available.
[1]See table 3, footnote 4, and for county figures, table 3, footnote 8.
[2]See table 3, footnote 5.

BY INDUSTRY AND COUNTY: 1954--Continued

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Nonmetallic minerals (except fuels) mining--Continued															
Crushed and broken stone				Sand and gravel			Clay, ceramic, and refractory minerals								
Limestone		Sandstone	Stone, n.e.c.	Common sand and gravel	Glass sand	Foundry sand	Fire clay		Clay, ceramic, and refractory minerals, n.e.c.		Natural abrasive stones	Nonmetallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels)		
Classified in mineral industries	Included in manufactures						Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures			Gypsum (included in manufactures)	Peat	
...	...	...	...	1	...	...	4	...	1	...	...	1	...	...	1
2	1	...	...	1	...	...	...	...	...	1	...	...	...	1	2
...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	3
...	1	1	...	12	...	1	6	...	...	7	...	1	...	4	4
1	...	...	...	13	...	...	1	...	...	1	...	...	...	1	5
...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	6
...	...	...	...	9	...	1	5	23	2	6	...	...	...	...	7
2	...	...	...	...	...	...	...	...	...	..	...	...	...	...	8
3	...	...	...	...	...	...	...	...	...	1	...	...	...	...	9
1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	10
...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	11
...	...	...	...	3	...	...	...	...	...	...	2	...	...	...	12
...	...	...	...	5	...	...	...	...	...	2	...	...	...	...	13
...	...	...	...	6	...	...	...	...	...	1	...	...	...	...	14
4	1	...	...	...	...	...	...	...	...	2	...	...	...	...	15
4	...	...	...	2	...	...	...	...	...	1	...	...	...	1	16

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Ohio, all mineral operations:												
Including operations classified in manufactures	1,793	212	818	295	248	155	35	18	8	4	...	...
Mineral industries only	1,654	206	763	266	225	136	31	16	7	4	...	...
Bituminous coal mining, total	534	74	170	88	94	70	19	11	4	4	...	...
Bituminous coal	517	70	163	83	94	69	19	11	4	4	...	...
Bituminous coal mining contract services	17	4	7	5	...	1	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	659	99	436	67	38	14	3	1	1	...	...	...
Crude petroleum and natural gas	520	96	359	30	22	9	2	1	1	...	...	...
Natural gas liquids	2	1	...	1	...	...	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	111	2	56	31	16	5	1	...	...	...	...	...
Building, repairing, and dismantling rigs and derricks	2	...	2	...	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	24	...	19	5	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	600	39	212	140	116	71	13	6	3	...	...	...
Mineral industries only	461	33	157	111	93	52	9	4	2	...	...	...
Dimension sandstone:												
Classified in mineral industries	9	1	5	3	...	...	...	...	...	...	...	...
Included in manufactures	6	...	...	...	1	2	...	2	1	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	102	2	15	25	26	24	4	4	2	...	...	...
Included in manufactures	20	...	1	2	4	10	3	...	...	...	...	...
Sandstone	4	...	1	1	...	1	1	...	...	...	...	...
Stone, n.e.c	1	...	1	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	262	17	104	73	49	15	4	...	...	...	...	...
Glass sand	1	...	...	...	...	1	...	...	...	...	...	...
Foundry sand	18	2	6	2	7	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	38	2	16	5	6	9	...	...	...	...	...	...
Included in manufactures	38	1	9	13	9	6	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	9	3	5	1	...	...	...	...	...	...	...	...
Included in manufactures	73	5	45	14	8	1	...	...	...	...	...	...
Natural abrasive stones	2	...	...	...	2	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	3	...	1	...	2	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (included in manufactures)	2	...	...	...	1	...	1	...	...	...	...	...
Peat	12	6	3	1	1	1	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Ohio, total	17,508	166,825	10,109	0.58	61	8,850	21,150	2,639	52,781	15	39	32	14
Bituminous coal mining, total	10,079	90,727	780	0.08	9	569	112	832	6,128	...	77	16	7
Bituminous coal	10,015	90,164	780	0.08	9	569	112	832	6,128	...	77	16	[4]7
Bituminous coal mining contract services	64	563	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	2,433	[5]17,459	296	0.12	17	24	xxx	xxx	308	3	23	36	38
Crude petroleum and natural gas	1,614	12,528	270	0.17	22	23	xxx	xxx	[6]270	1	21	40	[7]38
Drilling oil and gas wells contract services	742	4,537	23	0.03	5	1	xxx	xxx	[6]23	...	50	...	[4]50
Natural gas liquids and Oil and gas field contract services other than Drilling oil and gas wells	77	([5])	3	0.04	(NA)	...	xxx	xxx	38	100	...	...	...
Nonmetallic minerals (except fuels) mining, total	4,996	58,639	9,033	1.81	154	8,257	21,038	1,807	46,345	10	43	33	14
Dimension sandstone	28	285	1	0.04	4	1	...	...	1	100	...	...	...
Crushed and broken stone:													
Limestone	2,469	26,056	1,313	0.53	50	1,141	477	1,548	2,342	38	24	38	...
Sandstone	111	1,442	482	4.34	334	402	...	...	1,235	...	100	...	...
Sand and gravel:													
Common sand and gravel	1,709	22,753	6,848	4.01	301	6,326	20,561	...	42,284	3	42	38	[4]17
Glass sand and Foundry sand	175	1,091	334	1.91	306	334	...	...	428	21	50	...	[7]29
Clay, ceramic, and refractory minerals:													
Fire clay	389	6,103	51	0.13	8	49	...	259	51	62	16	24	...
Clay, ceramic, and refractory minerals, n.e.c.	19	203	4	0.21	20	4	...	...	4	...	...	100	...
Stone, n.e.c.; Natural abrasive stones; Nonmetallic minerals (except fuels) contract services; and Peat	96	706	...	...	...	...	...	...	...	...	...	...	...

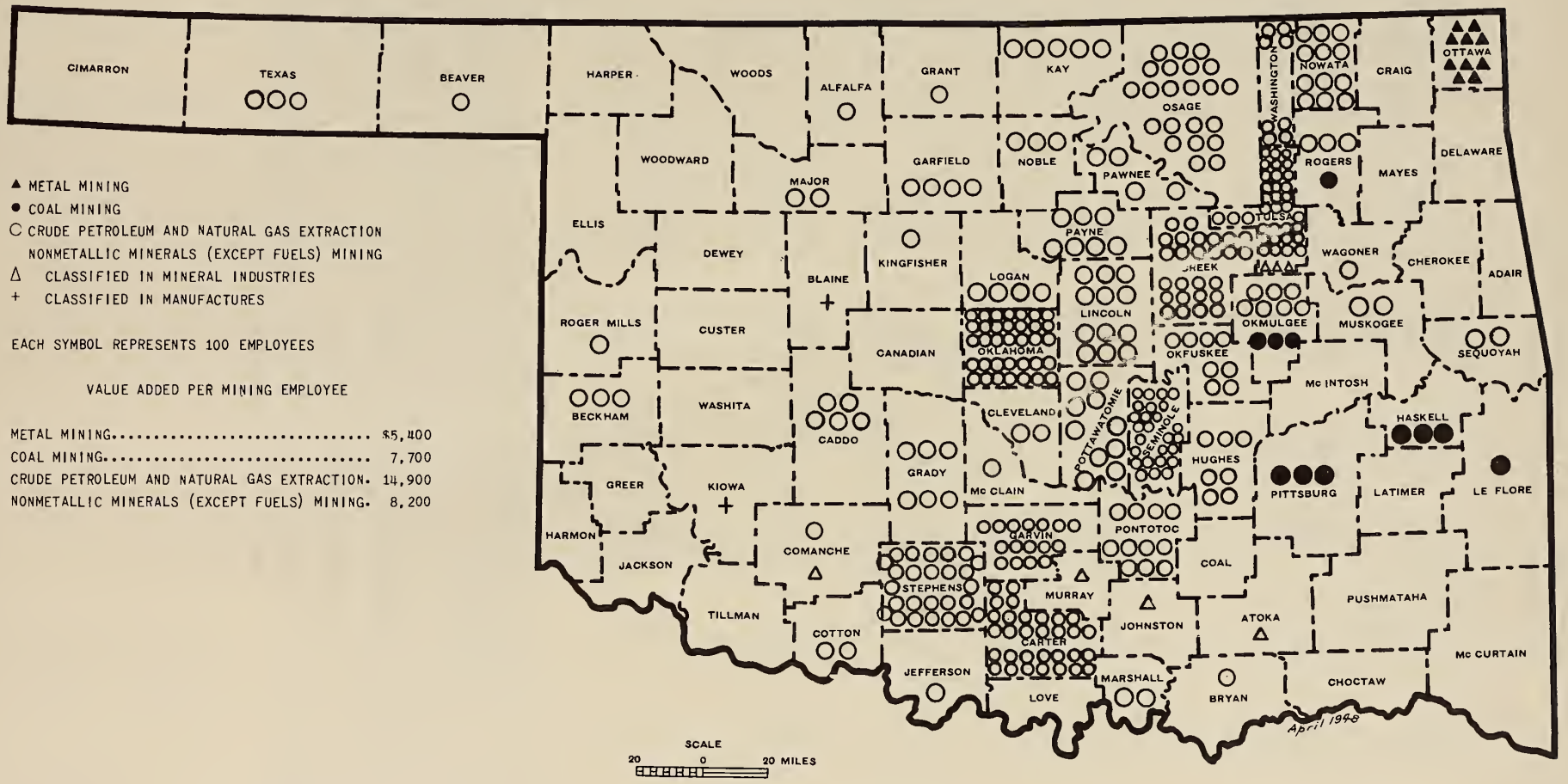
NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 149 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]Includes "not specified" as follows: for Bituminous coal, 1 percent; for Drilling oil and gas wells contract services, 40 percent; for Common sand and gravel, 14 percent.
[5]See table 2, footnote 6.
[6]Represents water intake only.
[7]Represents "not specified."

OKLAHOMA

135-1

MINING IN OKLAHOMA: 1954

Rank among States:
Employment, 4
Value of shipments, 5



▲ METAL MINING
● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$5,400
COAL MINING	7,700
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	14,900
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	8,200



Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes common clay and shale and contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries		
	1954	1939[1]	1919[2]	1909[2]	1902	1954	1939[1]	1929[3]
Number of operating companies	2,488	1,443	(NA)	[4]880	[4]20	198	[4]205	(NA)
Number of establishments	2,627	(NA)	1,964	888	(NA)	234	(NA)	220
Number of mines and quarries	224	236	286	212	38	224	236	284
Number of oil and gas wells producing at end of year	58,913	50,384	44,735	12,113	3	xxx	xxx	xxx
Number of preparation plants	185	223	(NA)	(NA)	(NA)	106	84	(NA)
Value of shipments[5]...$1,000	758,124	208,713	281,928	25,638	187	42,673	15,920	33,139
Value added in mining...do	586,635	173,015	192,429	18,025	151	26,301	11,780	25,211
Number of persons engaged, total	43,768	34,296	40,928	13,631	147	3,802	5,865	11,042
Production and development workers	30,534	26,188	33,959	11,678	[6]128	3,371	5,213	10,301
All other employees	10,566	7,124	5,860	1,281	19	224	540	[7]675
Proprietors and firm members	2,668	984	1,109	672	(NA)	207	112	66
Performing manual labor	1,095	267	58	93	(NA)	134	68	(NA)
Man-hours worked by production and development workers...1,000	61,532	46,857	(NA)	(NA)	(NA)	7,273	10,295	(NA)
Principal expenses designated below, total...$1,000	474,879	88,246	148,951	16,747	113	29,481	10,080	23,506
Wages of production and development workers...do	115,830	33,892	46,894	7,790	65	12,238	5,050	13,641
Salaries of all other employees...do	61,793	18,656	12,558	1,344	12	1,046	890	[7]1,937
Minerals received for preparation...do	17,576	(NA)	[8]9,758	[8]131	(NA)	6,864	(NA)	(NA)
Supplies...do	109,077	15,689	55,734	4,930		6,573	2,895	5,592
Fuel[9]...do	9,805	4,349	3,859	386	32	791	340	621
Purchased electric energy...do	4,818	1,871	967			1,172	728	1,431
Contract work...do	155,980	13,789	19,181	2,166	4	797	177	284
Purchased machinery installed...do	94,720		(NA)			2,089		950
Capital expenditures, total...do	220,478	(NA)	(NA)			1,914	(NA)	(NA)
Development and exploration of mineral property...do	114,243		55,823	(NA)	(NA)	61		518
Preparation plant construction...do	4,721	1,028				250	177	
Other construction...do	8,767		(NA)			48		(NA)
New machinery and equipment...do	87,132	8,228				1,440	164	
Used plant and equipment...do	5,615	3,398				115	241	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	2,301	1,027	449	95	([10])	274	92	108
Per production worker	75	39	13	8	xxx	81	18	10
Prime movers...1,000	2,017	946	417	95	([10])	97	47	39
Electric motors driven by purchased energy...do	284	81	32	([10])	...	177	45	69
Horsepower rating of electric motors driven by energy generated at establishment...do	37	55	6	2	...	1	11	5
Energy used...million kwh equivalent	31,302	23,132	(NA)			446	470	1,028
Coal...1,000 short tons	5	24	283			5	23	81
Fuel oils[11]...1,000 barrels	419	134	240			71	63	54
Gas[11]...million cu.ft	92,605	72,981	16,393	(NA)	(NA)	348	332	637
Electric energy purchased...million kwh	380	177	(NA)			86	51	93
Electric energy generated and used...do	139	86	(NA)			2	24	16

NA Not available.
xxx Not applicable.

[1]Excludes data for dimension stone dressing plants, if any, operated in conjunction with 2 dimension granite quarries.

[2]Excludes data for sand, gravel, common clay, and shale operations, and limestone quarries operated as part of cement and lime plants. The value of products of such common sand and gravel and common clay and shale operations in 1939 was $613,000.

[3]Excludes data for common clay and shale operations. There were 9 such mines in 1939 with products valued at $68,000.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909 represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years, the figures represent net production and exclude this duplication.

[6]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[7]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[8]Represents natural gas purchased for resale.

[9]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[10]Less than one-half of the unit of measure specified.

[11]Includes data for fuels produced and used at the same establishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Oklahoma, total		Metal mining and Bituminous coal mining				Crude petroleum and natural gas extraction			
		Including operations classified in manufactures	Mineral industries only	Total	Lead and zinc ores	Bituminous coal	Other industries	Total	Crude petroleum	Natural gas	Natural gas liquids
1	Number of operating companies	2,488	2,475	105	60	40	5	2,290	1,464	55	36
2	Number of establishments	2,627	2,610	120	73	42	5	2,389	1,480	55	75
	Number of mines, quarries, and producing oil and gas wells:										
3	1954	59,137	59,120	111	67	43	1	58,913	56,807	1,193	xxx
4	1939	50,620	(NA)	175	87	88	...	50,384	(NA)	(NA)	xxx
5	Number of preparation plants	185	183	15	11	4	...	79	xxx	xxx	79
	Value of shipments:[1]										
6	1954 ..... $1,000	758,124	755,206	27,652	15,129	12,069	[2]454	715,451	504,356	18,982	42,539
7	1939 ..... do	[3]208,713	(NA)	13,457	10,741	2,504	212	192,793	[4]164,702	([4])	16,393
8	Value added in mining ..... do	586,635	584,357	14,601	5,465	8,854	[2]282	[6]560,325	416,436	17,127	([6])
9	Number of persons engaged, total	43,768	43,523	2,336	1,104	1,198	34	39,966	23,236	371	2,395
10	Production and development workers	30,534	30,294	2,125	984	1,112	29	27,163	13,207	224	1,670
11	All other employees	10,566	10,565	84	30	53	1	10,342	8,496	119	714
12	Proprietors and firm members	2,668	2,664	127	90	33	4	2,461	1,533	28	11
13	Performing manual labor	1,095	1,095	91	70	21	...	961	536	11	3
	Man-hours worked by production and development workers:										
14	1954 1,000	61,532	61,057	4,365	2,375	1,926	64	54,259	25,516	335	3,416
15	1939 ..... do	[3]46,857	(NA)	8,198	5,991	2,009	198	36,560	[4]28,200	([4])	4,203
	At mines:										
16	Underground ..... do	2,583	2,583	2,583	1,396	1,183	4	xxx	xxx	xxx	xxx
17	Open-pit ..... do	1,985	1,574	478	...	437	41	xxx	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.) ..... do	[9]759	[9]759	601	276	306	19	xxx	xxx	xxx	xxx
19	At preparation plants ..... do	[9]5,362	[9]5,298	703	703		...	3,416	xxx	xxx	3,416
20	At oil and gas field operations ..... do	50,843	50,843	xxx	xxx	xxx	xxx	50,843	25,516	335	xxx
21	Man-hours spent on development and exploration work (included above) ..... do	23,360	23,360	22	18	...	4	23,324	4,701	115	(NA)
22	Principal expenses designated below, total $1,000	474,879	473,536	21,467	13,577	7,582	308	[6]445,398	304,692	7,726	[6]22,552
23	Wages of production and development workers ..... do	115,830	115,138	8,171	3,794	4,238	139	103,592	50,966	741	7,501
24	Salaries of all other employees ..... do	61,793	61,791	389	130	256	3	60,747	49,327	869	4,023
25	Minerals received for preparation ..... do	17,576	17,576	6,864	8,936	2,130	...	[6]113,216	xxx	xxx	[6]6,798
26	Supplies ..... do	109,077	108,448	4,294			92		57,671	1,924	
	Purchased fuel:										
27	Coal ..... do	38	38	35	35	...	...	1	1	...	...
28	Fuel oil ..... do	1,248	1,247	143	19	122	2	942	259	12	...
29	Gas ..... do	1,829	1,828	28	27	1	...	1,748	877	25	19
30	Other fuels ..... do	6,690	6,689	124	60	39	25	6,323	2,141	45	45
31	Purchased electric energy ..... do	4,818	4,801	763	539	223	1	3,646	3,365	3	221
32	Contract work ..... do	155,980	155,980	656	37	573	46	155,183	140,085	4,107	3,945
33	Purchased machinery installed ..... do	94,720	94,707	576	169	346	61	92,631	68,111	1,197	6,473
34	Capital expenditures, total ..... do	220,478	220,465	432	158	219	55	218,564	184,590	5,458	10,434
35	Development and exploration of mineral property ..... do	114,243	114,243	42	37	5	...	114,182	108,679	4,039	...
36	Preparation plant construction ..... do	4,721	4,721	...	...	...	...	4,471	xxx	xxx	4,471
37	Other construction ..... do	8,767	8,767	3	...	3	...	8,719	8,256	150	...
38	New machinery and equipment ..... do	87,132	87,126	344	111	179	54	85,692	64,786	1,254	5,620
39	Used plant and equipment ..... do	5,615	5,608	43	10	32	1	5,500	2,869	15	343
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	2,301	2,300	175	113	60	2	2,027	877	12	395
41	Per production worker	75	76	82	115	54	69	75	66	54	237
42	Prime movers 1,000	2,017	2,017	49	16	31	2	1,920	783	8	388
43	Electric motors driven by purchased energy ..... do	284	283	126	97	29	...	107	94	4	7
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	37	37	([10])	([10])	([10])	...	36	7	...	27
45	Energy used ..... million kwh equivalent	31,302	31,302	208	131	71	6	30,825	15,837	76	11,185
	Produced and used for fuel at same establishment:										
46	Crude petroleum ..... 1,000 barrels	153	153	...	xxx	xxx	xxx	153	153	...	...
47	Natural gas ..... million cu.ft	73,030	73,030	...	xxx	xxx	xxx	73,030	36,803	78	36,074
	Fuel purchased:										
48	Coal ..... 1,000 short tons	5	5	5	5	...	...	([10])	([10])	...	...
49	Fuel oil ..... 1,000 barrels	266	265	31	5	26	([10])	195	52	5	...
50	Gas ..... million cu.ft	19,575	19,575	101	98	3	...	19,127	10,880	120	190
51	Electric energy purchased ..... million kwh	380	379	56	40	16	([10])	294	275	([10])	16
52	Electric energy generated and used ..... do	139	139	...	...	...	...	137	16	...	106
53	Water intake, including mine water used ..... million gallons	18,552	18,552	981	685	296	...	15,637	11,913	8	2,856
54	Per production worker ..... do	0.61	0.61	0.46	0.70	0.27	...	0.58	0.90	0.04	1.71

NA Not available. xxx Not applicable. [1]See table 1, footnote 5. [2]Excludes data for Uranium-radium-vanadium ores. No figures for value of shipments or coat of minerals received for preparation were obtained for thia industry. [3]See table 1, footnote 1. [4]Figures for the Natural gas industry are included with those for the Crude petroleum industry. [5]Figurea for 2 glaaa aand eatablishments and one bentonite mine are included with those for "Other nonmetallic minerals (except fuels) mining." [6]No data were obtained on the value of gaa received for processing at natural gaa liquids plants or on the value of residue gaa sold or transferred. However, the estimated value (prior to proceasing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction—Continued			Nonmetallic minerals (except fuels) mining									
Oil and gas field contrsct services			Total		Dimension stone (including operations classified in manufactures)	Crushed and broken stone		Sand and gravel		Clay, ceramic, and refractory minerals (including operations classified in manufactures)	Other nonmetsllic minerals (except fuels) mining (including operations classified in manufactures)	
Drilling oil and gas wells	Building, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Including operations clsssified in manufactures	Mineral industries only		All stone (including operations classified in manufactures)	Crushed and broken Limestone (mineral industries only)	Common sand and gravel	Glass sand and Foundry sand			
424	10	344	95	82	7	22	16	47	5	11	7	1
425	10	344	118	101	7	26	19	59	5	14	7	2
846	...	67	113	96	7	22	19	59	5	14	6	3
(NA)	(NA)	(NA)	61	(NA)	2	20	(NA)	21	2	10	6	4
xxx	xxx	xxx	91	89	2	24	19	53	5	2	5	5
116,235	953	32,386	15,021	12,103	450	7,736	5,975	2,884	825	562	2,564	6
8,749	198	2,751	[3]2,463	(NA)	([3])	1,182	(NA)	546	([5])	[5]68	[5]667	7
72,932	757	25,411	11,700	9,431	295	5,897	4,505	2,334	622	354	2,198	8
9,363	146	4,455	1,466	1,221	79	695	627	337	81	104	170	9
8,170	125	3,767	1,246	1,006	68	627	561	256	71	99	125	10
745	7	261	140	139	1	60	60	31	5	4	39	11
448	14	427	80	76	10	8	6	50	5	1	6	12
199	8	204	43	43	4	5	3	32	2	...	...	13
17,173	146	7,673	2,908	2,433	122	1,581	1,437	581	174	201	249	14
3,045	57	1,055	[3]2,099	(NA)	([3])	1,253	(NA)	437	([5])	[5]57	[5]352	15
xxx	xxx	xxx	...	...	...	...	...	...	...	...	...	16
xxx	xxx	xxx	1,507	1,096	54	827	739	[7]236	[7]49	171	170	17
xxx	xxx	xxx	158	158	4	141	141	(NA)	(NA)	...	13	18
xxx	xxx	xxx	1,243	1,179	64	613	557	345	125	30	66	19
17,173	146	7,673	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
16,247	117	2,144	14	14	...	...	14	...	...	...	...	21
81,077	571	20,970	8,014	6,671	309	4,217	3,576	1,520	466	491	1,011	22
31,826	332	12,226	4,067	3,375	153	2,201	1,951	835	239	262	377	23
5,080	41	1,407	657	655	2	208	208	147	21	21	258	24
xxx	xxx	xxx	...	...	...	...	...	(NA)	(NA)	...	...	25
34,263	129	4,621	2,279	1,650	101	[8]1,344	972	259	104	[8]169	[8]302	26
...	...	...	2	2	...	[8]2	1	(NA)	(NA)	...	...	27
605	...	66	163	162	1	[8]63	62	34	49	...	[8]16	28
820	...	7	53	52	1	[8]11	11	7	([2])	[8]20	[8]14	29
2,697	38	1,357	243	242	4	[8]118	112	88	11	[8]3	[8]19	30
50	...	7	409	392	17	[8]209	198	124	42	[8]3	[8]14	31
5,736	31	1,279	141	141	30	[8]61	61	26	...	[8]13	[8]11	32
13,660	75	3,115	1,513	1,500	14	[11]835	820	469	183	...	[11]12	33
14,528	77	3,477	1,482	1,469	13	[11]804	767	457	186	...	[11]22	34
1,347	...	117	19	19	...	[11]12	12	1	...	...	116	35
xxx	xxx	xxx	250	250	...	[11]187	187	30	27	...	116	36
239	1	73	45	45	...	[11]36	10	9	...	...	...	37
10,955	76	3,031	1,096	1,090	6	[11]554	543	370	159	...	117	38
1,987		256	72	65	7	[11]15	15	47	...	...	113	39
528	5	210	99	98	2	[11]37	34	22	6	...	[11]32	40
65	40	56	79	97	29	[11]59	60	86	79	...	256	41
526	5	210	48	48	1	[11]24	22	15	4	...	114	42
2	...	...	51	50	1	[11]13	12	7	2	...	[11]28	43
2	...	...	1	1	...	[11]1	1	...	...	...	...	44
3,315	10	402	269	269	3	[11]117	113	52	28	[11]32	[11]37	45
...	...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
75	...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
...	...	...	([10])	([10])	...	([10])	([10])	...	...	...	...	48
125	...	13	40	39	1	[11]13	13	6	12	...	118	49
7,805	...	132	347	347	1	[11]153	153	34	2	100	[11]57	50
3	...	([10])	30	29	1	[11]16	16	9	4	([10])	([10])	51
15	...	...	2	2	...	[11]2	1	...	...	...	...	52
814	...	46	1,934	1,934	...	[11]179	66	1,210	542	...	113	53
0.10	...	0.01	1.55	1.92	...	0.29	0.12	4.73	7.62	...	0.02	54

preparstion and the figures for value sdded in mining may bear a ressonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Nstural gss liquids industries and no value sdded figure is shown for these industries. [7]Includes msn-hours worked on floating equipment. [8]Figures for fuels, electric energy, and contract work for crushed stone, clsy, and gypsum operstions classified in msnufsctures are included with figures for supplies. [9]For Bituminous coal, combined figures reported for man-hours st prepsrstion plants and man-hours st surfsce are included with man-hours st surface, since less than 40 percent of the coal shipped was mechanically cleaned. [10]Less than one-hslf of the unit of measure specified. [11]Excludes figures for crushed stone, clay, and gypsum operations clssified in manufactures.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Oklahoma, all mineral operations: Including operations in manufactures	2,627	758,124	586,635	30,534	10,566	61,532	115,830	61,793	[2]214,863
Mineral industries only: Including crude petroleum and natural gas extraction	2,610	755,206	584,357	30,294	10,565	61,057	115,138	61,791	214,857
Excluding crude petroleum and natural gas extraction	238	42,673	26,301	3,462	224	7,273	12,238	1,046	1,799
Metal mining and Bituminous coal mining, total	120	27,652	14,601	2,125	84	4,365	8,171	389	389
Lead and zinc ores	73	15,129	5,465	984	30	2,375	3,794	130	148
Bituminous coal	42	12,069	8,854	1,112	53	1,926	4,238	256	187
Other industries	5	454	282	29	1	64	139	3	54
Crude petroleum and natural gas extraction, total	2,389	715,451	[3]560,325	27,163	10,342	54,259	103,592	60,747	213,064
Crude petroleum and natural gas[4]	1,535	523,338	433,563	13,431	8,615	25,851	51,707	50,196	187,164
Natural gas liquids	75	42,539	([3])	1,670	714	3,416	7,501	4,023	10,091
Oil and gas field contract services[5]	779	149,574	99,100	12,062	1,013	24,992	44,384	6,528	15,809
Nonmetallic minerals (except fuels) mining, total: Including operations in manufactures	118	15,021	11,700	1,246	140	2,908	4,067	657	[2]1,410
Mineral industries only	101	12,103	9,431	1,006	139	2,433	3,375	655	1,404
Dimension stone (including operations in manufactures)	7	450	295	68	1	122	153	2	6
Crushed and broken stone (including operations in manufactures)	26	7,736	5,897	662	60	1,581	2,201	208	[2]789
Sand and gravel	64	3,709	2,956	327	36	755	1,074	168	596
Clay, ceramic, and refractory minerals (including operations in manufactures)	14	562	354	122	4	201	262	21	...
Other nonmetallic minerals (except fuels) mining (including operations in manufactures)	7	2,564	2,198	158	39	249	377	258	[2]19
COUNTY									
Alfalfa	13	(NA)	(NA)	[6]76	([6])	(NA)	(NA)	(NA)	(NA)
Beaver	10	(NA)	(NA)	[6]64	([6])	(NA)	(NA)	(NA)	(NA)
Beckham	12	(NA)	(NA)	[6]222	([6])	(NA)	(NA)	(NA)	(NA)
Bryan	9	(NA)	(NA)	[6]71	([6])	(NA)	(NA)	(NA)	(NA)
Caddo	49	(NA)	(NA)	[6]298	([6])	(NA)	(NA)	(NA)	(NA)
Canadian	7	(NA)	(NA)	[6]22	([6])	(NA)	(NA)	(NA)	(NA)
Carter, total	173	(NA)	(NA)	[6]1,824	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	167	(NA)	(NA)	[6]1,729	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	6	1,438	1,136	85	10	177	390	61	4,427
Cleveland	40	(NA)	(NA)	[6]135	([6])	(NA)	(NA)	(NA)	(NA)
Coal, total	14	(NA)	(NA)	[6]34	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	11	(NA)	(NA)	[6]20	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	3	(D)	(D)	14	2	(D)	(D)	(D)	(D)
Comanche	19	(NA)	(NA)	[6]125	([6])	(NA)	(NA)	(NA)	(NA)
Cotton	48	(NA)	(NA)	[6]122	([6])	(NA)	(NA)	(NA)	(NA)
Craig	6	(NA)	(NA)	[6]21	([6])	(NA)	(NA)	(NA)	(NA)
Creek, total	277	(NA)	(NA)	[6]1,747	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	271	(NA)	(NA)	[6]1,603	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Crushed and broken stone, n.e.c	6	2,479	2,192	136	8	263	615	46	85

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY--Continued									
Garfield (mineral industries only)	42	(NA)	(NA)	[6]421	([6])	(NA)	(NA)	(NA)	(NA)
Garvin, total	127	(NA)	(NA)	[6]1,012	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	120	(NA)	(NA)	[6]803	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	7	5,966	5,312	179	30	427	817	121	1,684
Grady	54	(NA)	(NA)	[6]364	([6])	(NA)	(NA)	(NA)	(NA)
Grant	17	(NA)	(NA)	[6]41	([6])	(NA)	(NA)	(NA)	(NA)
Haskell (Bituminous coal only)	6	3,386	2,305	254	7	448	982	28	35
Hughes	98	(NA)	(NA)	[6]380	([6])	(NA)	(NA)	(NA)	(NA)
Jackson	14	(NA)	(NA)	[6]33	([6])	(NA)	(NA)	(NA)	(NA)
Jefferson	26	(NA)	(NA)	[6]56	([6])	(NA)	(NA)	(NA)	(NA)
Johnston	4	971	759	93	6	217	321	28	144
Kay, total	76	(NA)	(NA)	[6]317	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	70	(NA)	(NA)	[6]248	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	6	2,546	2,235	61	8	118	210	41	67
Kingfisher	9	(NA)	(NA)	[6]54	([6])	(NA)	(NA)	(NA)	(NA)
Kiowa (mineral industries only)	9	(NA)	(NA)	[6]40	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	5	265	235	28	7	68	80	14	47
Latimer	3	(NA)	(NA)	[6]26	([6])	(NA)	(NA)	(NA)	(NA)
Le Flore (Bituminous coal only)	13	2,014	1,369	110	7	184	453	43	55
Lincoln, total	38	(NA)	(NA)	[6]713	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	34	(NA)	(NA)	[6]640	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	4	705	596	65	8	126	290	44	342
Logan	81	(NA)	(NA)	[6]222	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	78	(NA)	(NA)	[6]195	([6])	(NA)	(NA)	(NA)	(NA)
Love	10	(NA)	(NA)	[6]12	([6])	(NA)	(NA)	(NA)	(NA)
McClain	38	(NA)	(NA)	[6]114	([6])	(NA)	(NA)	(NA)	(NA)
McIntosh	3	(NA)	(NA)	[6]42	([6])	(NA)	(NA)	(NA)	(NA)
Major, total	25	(NA)	(NA)	[6]127	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	21	(NA)	(NA)	[6]63	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	4	838	727	[6]64	([6])	112	[6]220	([6])	10
Marshall	19	(NA)	(NA)	[6]120	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	16	(NA)	(NA)	[6]72	([6])	(NA)	(NA)	(NA)	(NA)
Murray	7	[8]1,849	[8]1,551	[6]169	([6])	[8]417	[6] [8]610	([6])	[8]251
Muskogee	39	(NA)	(NA)	[6]126	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	35	(NA)	(NA)	[6]101	([6])	(NA)	(NA)	(NA)	(NA)
Noble	60	(NA)	(NA)	([6])	([6])	(NA)	(NA)	(NA)	(NA)
Nowata	70	(NA)	(NA)	[6]678	([6])	(NA)	(NA)	(NA)	(NA)
Okfuskee	116	(NA)	(NA)	[6]467	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY--Continued									
Oklahoma (mineral industries only), total	125	(NA)	(NA)	[6]3,177	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	108	(NA)	(NA)	[6]2,810	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	17	8,458	4,792	245	122	528	1,056	594	323
Okmulgee, total	139	(NA)	(NA)	[6]750	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	4	(D)	(D)	297	14	(D)	(D)	(D)	(D)
Crude petroleum and natural gas[7]	135	(NA)	(NA)	[6]439	([6])	(NA)	(NA)	(NA)	(NA)
Osage, total	209	(NA)	(NA)	[6]1,373	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	201	(NA)	(NA)	[6]1,206	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Crushed and broken limestone	8	1,660	1,513	150	17	297	631	77	168
Ottawa	80	16,627	6,688	1,028	34	2,483	3,968	186	190
Lead and zinc ores	72	15,129	[9]5,465	[9]984	30	[9]2,375	[9]3,794	130	148
Pawnee	100	(NA)	(NA)	[6]246	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	96	(NA)	(NA)	[6]233	([6])	(NA)	(NA)	(NA)	(NA)
Payne	114	(NA)	(NA)	[6]443	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	111	(NA)	(NA)	[6]407	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	3	214	184	33	3	67	108	8	24
Pittsburg	6	(NA)	(NA)	[6]274	([6])	(NA)	(NA)	(NA)	(NA)
Pontotoc (mineral industries only), total	145	(NA)	(NA)	[6]674	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	139	(NA)	(NA)	[6]590	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	6	887	761	79	5	160	284	25	43
Pottawatomie, total	128	(NA)	(NA)	[6]601	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	125	(NA)	(NA)	[6]521	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	3	1,034	849	71	9	138	308	57	113
Rogers	43	(NA)	(NA)	[6]306	([6])	(NA)	(NA)	(NA)	(NA)
Seminole, total	194	(NA)	(NA)	[6]1,534	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	188	(NA)	(NA)	[6]1,336	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	6	3,903	3,433	186	18	353	844	114	339
Sequoyah	8	(NA)	(NA)	[6]122	([6])	(NA)	(NA)	(NA)	(NA)
Stephens, total	186	(NA)	(NA)	[6]1,537	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	182	(NA)	(NA)	[6]1,407	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	4	2,929	2,690	119	11	240	559	55	586
Texas, total	20	(NA)	(NA)	[6]182	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	16	(NA)	(NA)	[6]106	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	4	2,379	2,270	45	31	94	280	243	24
Tillman	13	(NA)	(NA)	[6]26	([6])	(NA)	(NA)	(NA)	(NA)
Tulsa (mineral industries only), total	176	(NA)	(NA)	[6]4,798	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	163	(NA)	(NA)	[6]4,521	([6])	(NA)	(NA)	(NA)	(NA)
Other mineral industries	13	2,165	1,566	239	38	646	810	149	312
Crushed and broken stone	3	1,559	1,091	178	25	497	613	100	261

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees		Man-hours worked by production and development workers (1,000)	Wages and salaries		New capital expenditures ($1,000)
				Production and development workers	All other employees		Production and development workers ($1,000)	All other employees ($1,000)	
COUNTY--Continued									
Wagoner	31	(NA)	(NA)	[6]75	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	27	(NA)	(NA)	[6]51	([6])	(NA)	(NA)	(NA)	(NA)
Washington (mineral industries only)	115	(NA)	(NA)	[6]704	([6])	(NA)	(NA)	(NA)	(NA)
Woods	3	(NA)	(NA)	[6]15	([6])	(NA)	(NA)	(NA)	(NA)

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 5.
[2]See table 2, footnote 11.
[3]See table 2, footnote 6.
[4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.
[6]Figures for "All other employees" are included with those for "Production and development workers."
[7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the oil and gas field contract services industries which showed oil or gas production as a secondary activity.
[8]Excludes data for 2 Crude petroleum or Natural gas establishments.
[9]Includes data for 1 nonproducing mine in Sequoyah county.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	State and county	All mineral operations			Metal mining				Bituminous coal mining	
		Total	Classified in mineral industries	Included in manufactures	Lead and zinc ores		Metal mining contract services	Uranium-radium-vanadium ores	Bituminous coal	Bituminous coal mining contract services
					Valued chiefly for lead	Valued chiefly for zinc				
1	Oklahoma, total	2,627	2,610	17	19	54	3	1	42	1
2	Alfalfa	13	13	...	...	...	...	...	...	...
3	Atoka	1	1	...	...	...	...	...	...	...
4	Beaver	10	10	...	...	...	...	...	...	...
5	Beckham	12	12	...	...	...	...	...	...	...
6	Blaine	3	2	1	...	...	...	...	...	...
7	Bryan	9	9	...	...	...	...	...	...	...
8	Caddo	49	49	...	...	...	...	...	...	...
9	Canadian	7	7	...	...	...	...	...	...	...
10	Carter	173	173	...	...	...	...	...	...	...
11	Choctaw	1	1	...	...	...	...	...	...	...
12	Cimarron	8	8	...	...	...	...	...	...	...
13	Cleveland	40	40	...	...	...	...	...	...	...
14	Coal	14	14	...	...	...	...	...	3	...
15	Comanche	19	19	...	...	...	...	...	...	...
16	Cotton	48	48	...	...	...	...	...	...	...
17	Craig	6	6	...	...	...	...	...	1	...
18	Creek	277	277	...	...	...	...	...	...	...
19	Custer	2	1	1	...	...	...	...	...	...
20	Delaware	2	2	...	...	...	...	...	...	...
21	Dewey	2	2	...	...	...	...	...	...	...
22	Garfield	43	42	1	...	...	...	...	...	...
23	Garvin	127	127	...	...	...	...	...	...	...
24	Grady	54	54	...	...	...	...	...	...	...
25	Grant	17	17	...	...	...	...	...	...	...
26	Greer	4	3	1	...	...	...	...	...	...
27	Harmon	1	1	...	...	...	...	...	...	...
28	Harper	2	2	...	...	...	...	...	...	...
29	Haskell	7	7	...	...	...	...	...	6	1
30	Hughes	98	98	...	...	...	...	...	...	...
31	Jackson	14	14	...	...	...	...	...	...	...
32	Jefferson	26	26	...	...	...	...	...	...	...
33	Johnston	4	4	...	...	...	...	...	...	...
34	Kay	76	76	...	...	...	...	...	...	...
35	Kingfisher	9	9	...	...	...	...	...	...	...
36	Kiowa	11	9	2	...	...	...	...	...	...
37	Latimer	3	3	...	...	...	...	...	2	...
38	Le Flore	14	14	...	...	...	...	...	13	...
39	Lincoln	38	38	...	...	...	...	...	...	...
40	Logan	81	81	...	...	...	...	...	...	...
41	Love	10	10	...	...	...	...	...	...	...
42	McClain	38	38	...	...	...	...	...	...	...
43	McCurtain	1	1	...	...	...	...	...	...	...
44	McIntosh	3	3	...	...	...	...	...	2	...
45	Major	25	25	...	...	...	...	...	...	...
46	Marshall	19	19	...	...	...	...	...	...	...
47	Mayes	3	3	...	...	...	...	...	...	...
48	Murray	7	7	...	...	...	...	...	...	...
49	Muskogee	39	39	...	...	...	...	...	2	...
50	Noble	60	60	...	...	...	...	...	...	...
51	Nowata	70	70	...	...	...	...	...	...	...
52	Okfuskee	116	116	...	...	...	...	...	...	...
53	Oklahoma	128	125	3	...	...	...	...	...	...
54	Okmulgee	139	139	...	...	...	...	...	4	...
55	Osage	209	209	...	...	...	...	...	...	...
56	Ottawa	80	80	...	19	53	3	...	...	...
57	Pawnee	100	100	...	...	...	...	...	...	...
58	Payne	114	114	...	...	...	...	...	...	...
59	Pittsburg	6	6	...	...	...	...	...	2	...
60	Pontotoc	148	145	3	...	...	...	...	...	...
61	Pottawatomie	128	128	...	...	...	...	...	...	...
62	Pushmataha	5	4	1	...	...	...	...	...	...
63	Roger Mills	1	1	...	...	...	...	...	...	...
64	Rogers	43	43	...	...	...	...	...	2	...
65	Seminole	194	194	...	...	...	...	...	...	...
66	Sequoyah	8	8	...	...	1	...	...	3	...
67	Stephens	186	186	...	...	...	...	...	...	...
68	Texas	20	20	...	...	...	...	...	...	...
69	Tillman	13	13	...	...	...	...	...	...	...
70	Tulsa	179	176	3	...	...	...	...	1	...
71	Wagoner	31	31	...	...	...	...	...	1	...
72	Washington	116	115	1	...	...	...	1	...	...
73	Washita	10	10	...	...	...	...	...	...	...
74	Woods	3	3	...	...	...	...	...	...	...
75	Woodward	1	1	...	...	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining											
			Dimension stone					Crushed and broken stone			Sand and gravel			
				Granite				Limestone						
Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Limestone	Classified in mineral industries	Included in manufactures	Sandstone	Stone, n.e.c.	Classified in mineral industries	Included in manufactures	Stone, n.e.c.	Common sand and gravel	Glass sand	Foundry sand	
1,535	75	779	1	1	2	2	1	19	2	5	59	4	1	1
11	1		...	...	...	...	...	...	...	...	1	...	...	2
...	...		...	...	...	...	...	1	...	...	...	...	...	3
8	...		...	...	...	...	...	...	...	...	1	...	...	4
11	1		...	...	...	...	...	...	...	...	...	...	...	5
...	...		...	...	...	...	...	...	...	...	...	...	...	6
7	...		...	...	...	...	...	...	...	...	2	...	...	7
46	1		...	...	...	...	...	...	...	...	2	...	...	8
6	...		...	...	...	...	...	...	...	...	...	1	...	9
167	6		...	...	...	...	...	...	...	...	...	...	...	10
...	...		...	...	...	...	...	...	...	...	1	...	...	11
7	...		...	...	...	...	...	...	...	...	1	...	...	12
39	1		...	...	...	...	...	...	...	...	...	...	...	13
11	...		...	...	...	...	...	...	...	...	...	...	...	14
17	...		...	...	...	...	...	1	...	...	1	...	...	15
48	...		...	...	...	...	...	...	...	...	...	...	...	16
5	...		...	...	...	...	...	...	...	...	...	...	...	17
271	5		...	...	...	...	...	...	...	1	...	...	...	18
...	1		...	...	...	...	...	...	...	...	...	...	...	19
2	...		...	...	...	...	...	...	...	...	...	...	...	20
...	...		...	...	...	...	...	...	...	...	1	...	...	21
40	2		...	...	...	...	...	...	...	...	...	...	...	22
120	5		...	...	...	...	...	...	...	...	2	...	...	23
52	1		...	...	...	...	...	...	...	...	1	...	...	24
17	...		...	...	...	...	...	...	...	...	...	...	...	25
...	...		...	...	...	...	...	...	...	...	3	...	...	26
...	1		...	...	...	...	...	...	...	...	...	...	...	27
2	...		...	...	...	...	...	...	...	...	...	...	...	28
...	...		...	...	...	...	...	...	...	...	...	...	...	29
97	1		...	...	...	...	...	...	...	...	...	...	...	30
13	...		...	...	...	...	...	...	...	...	1	...	...	31
26	...		...	...	...	...	...	...	...	...	...	...	...	32
...	...		...	...	...	...	...	2	...	...	1	1	...	33
70	1		...	...	...	...	...	2	...	...	3	...	...	34
8	...		...	...	...	...	...	...	...	...	1	...	...	35
4	...		...	1	2	...	...	1	...	...	3	...	...	36
1	...		...	...	...	...	...	...	...	...	...	...	...	37
1	...	(NA)	...	...	...	...	...	...	...	...	...	...	...	38
34	4		...	...	...	...	...	...	...	...	...	...	...	39
78	1		...	...	...	...	...	...	...	...	2	...	...	40
10	...		...	...	...	...	...	...	...	...	...	...	...	41
38	...		...	...	...	...	...	...	...	...	...	...	...	42
...	...		...	...	...	...	...	...	...	...	1	...	...	43
1	...		...	...	...	...	...	...	...	...	...	...	...	44
21	1		...	...	...	...	...	...	...	...	3	...	...	45
16	2		...	...	...	...	...	...	...	...	...	...	...	46
...	...		...	...	...	1	...	2	...	...	...	...	...	47
2	...		...	...	...	...	...	2	...	...	1	1	...	48
35	...		...	...	...	...	...	...	...	...	2	...	...	49
59	1		...	...	...	...	...	...	...	...	...	...	...	50
69	...		...	...	...	...	...	1	...	...	...	...	...	51
114	2		...	...	...	...	...	...	...	...	...	...	...	52
108	10		...	...	...	...	...	1	...	...	5	...	...	53
135	...		...	...	...	...	...	...	...	...	...	...	...	54
201	7		...	...	...	...	...	1	...	...	...	...	...	55
...	...		...	...	...	...	...	...	...	4	...	...	...	56
96	...		...	...	...	...	...	1	...	...	3	...	...	57
111	2		...	...	...	...	...	...	...	...	1	...	...	58
4	...		...	...	...	...	...	...	...	...	...	...	...	59
139	2		1	...	...	...	1	...	1	...	...	1	1	60
125	3		...	...	...	...	...	...	...	...	...	...	...	61
4	...		...	...	...	...	...	...	...	...	...	...	...	62
1	...		...	...	...	...	...	...	...	...	...	...	...	63
41	...		...	...	...	...	...	...	...	...	...	...	...	64
188	5		...	...	...	...	...	...	...	...	1	...	...	65
3	...		...	...	...	1	...	...	...	...	...	...	...	66
182	4		...	...	...	...	...	...	...	...	...	...	...	67
16	3		...	...	...	...	...	...	...	...	1	...	...	68
12	...		...	...	...	...	...	...	...	...	1	...	...	69
163	1		...	...	...	...	...	3	...	...	8	...	...	70
27	...		...	...	...	...	...	...	...	...	3	...	...	71
113	...		...	...	...	...	...	1	1	...	...	...	...	72
10	...		...	...	...	...	...	...	...	...	...	...	...	73
2	...		...	...	...	...	...	...	...	...	1	...	...	74
...	...		...	...	...	...	...	...	...	...	1	...	...	75

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nonmetallic minerals (except fuels) mining—Continued								
	Clay, ceramic, and refractory minerals			Natural abrasives, except sand, n.e.c.	Chemical and fertilizer mineral mining, n.e.c.	Miscellaneous nonmetallic (except fuels) mining			
	Bentonite	Clay, ceramic, and refractory minerals, n.e.c.				Gypsum		Native asphalt and bitumens	Pumice and pumicite
		Classified in mineral industries	Included in manufactures			Classified in mineral industries	Included in manufactures		
Oklahoma, total	1	1	12	1	1	2	1	1	1
Alfalfa	...	...	...	...	...	...	...	...	...
Atoka	...	...	...	...	...	...	...	...	...
Beaver	...	...	...	...	...	...	...	...	1
Beckham	...	...	...	...	...	...	...	...	...
Blaine	...	...	...	...	...	2	1	...	...
Bryan	...	...	...	...	...	...	...	...	...
Caddo	...	...	...	...	...	...	...	...	...
Canadian	...	...	...	...	...	...	...	...	...
Carter	...	...	...	...	...	...	...	...	...
Choctaw	...	...	...	...	...	...	...	...	...
Cimarron	...	...	...	...	...	...	...	...	...
Cleveland	...	...	...	...	...	...	...	...	...
Coal	...	...	...	...	...	...	...	...	...
Comanche	...	...	...	...	...	...	...	...	...
Cotton	...	...	...	...	...	...	...	...	...
Craig	...	...	...	...	...	...	...	...	...
Creek	...	...	...	...	...	...	...	...	...
Custer	...	...	1	...	...	...	...	...	...
Delaware	...	...	...	...	...	...	...	...	...
Dewey	1	...	...	...	...	...	...	...	...
Garfield	...	...	1	...	...	...	...	...	...
Garvin	...	...	...	...	...	...	...	...	...
Grady	...	...	...	...	...	...	...	...	...
Grant	...	...	...	...	...	...	...	...	...
Greer	...	...	1	...	...	...	...	...	...
Harmon	...	...	...	...	...	...	...	...	...
Harper	...	...	...	...	...	...	...	...	...
Haskell	...	...	...	...	...	...	...	...	...
Hughes	...	...	...	...	...	...	...	...	...
Jackson	...	...	...	...	...	...	...	...	...
Jefferson	...	...	...	...	...	...	...	...	...
Johnston	...	...	...	...	...	...	...	...	...
Kay	...	...	...	...	...	...	...	...	...
Kingfisher	...	...	...	...	...	...	...	...	...
Kiowa	...	...	...	...	...	...	...	...	...
Latimer	...	...	...	...	...	...	...	...	...
Le Flore	...	...	...	...	...	...	...	...	...
Lincoln	...	...	...	...	...	...	...	...	...
Logan	...	...	...	...	...	...	...	...	...
Love	...	...	...	...	...	...	...	...	...
McClain	...	...	...	...	...	...	...	...	...
McCurtain	...	...	...	...	...	...	...	...	...
McIntosh	...	...	...	...	...	...	...	...	...
Major	...	...	...	...	...	...	...	...	...
Marshall	...	...	...	...	1	...	...	...	...
Mayes	...	...	...	...	...	...	...	...	...
Murray	...	...	...	...	...	...	...	1	...
Muskogee	...	...	...	...	...	...	...	...	...
Noble	...	...	...	...	...	...	...	...	...
Nowata	...	...	...	...	...	...	...	...	...
Okfuskee	...	...	...	...	...	...	...	...	...
Oklahoma	...	1	3	...	...	...	...	...	...
Okmulgee	...	...	...	...	...	...	...	...	...
Osage	...	...	...	...	...	...	...	...	...
Ottawa	...	...	...	1	...	...	...	...	...
Pawnee	...	...	...	...	...	...	...	...	...
Payne	...	...	...	...	...	...	...	...	...
Pittsburg	...	...	...	...	...	...	...	...	...
Pontotoc	...	...	2	...	...	...	...	...	...
Pottawatomie	...	...	...	...	...	...	...	...	...
Pushmataha	...	...	1	...	...	...	...	...	...
Roger Mills	...	...	...	...	...	...	...	...	...
Rogers	...	...	...	...	...	...	...	...	...
Seminole	...	...	...	...	...	...	...	...	...
Sequoyah	...	...	...	...	...	...	...	...	...
Stephens	...	...	...	...	...	...	...	...	...
Texas	...	...	...	...	...	...	...	...	...
Tillman	...	...	...	...	...	...	...	...	...
Tulsa	...	...	3	...	...	...	...	...	...
Wagoner	...	...	...	...	...	...	...	...	...
Washington	...	...	...	...	...	...	...	...	...
Washita	...	...	...	...	...	...	...	...	...
Woods	...	...	...	...	...	...	...	...	...
Woodward	...	...	...	...	...	...	...	...	...

NA Not available. [1]See table 3, footnote 4, and for counties, footnote 7. [2]See table 3, footnote 5.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

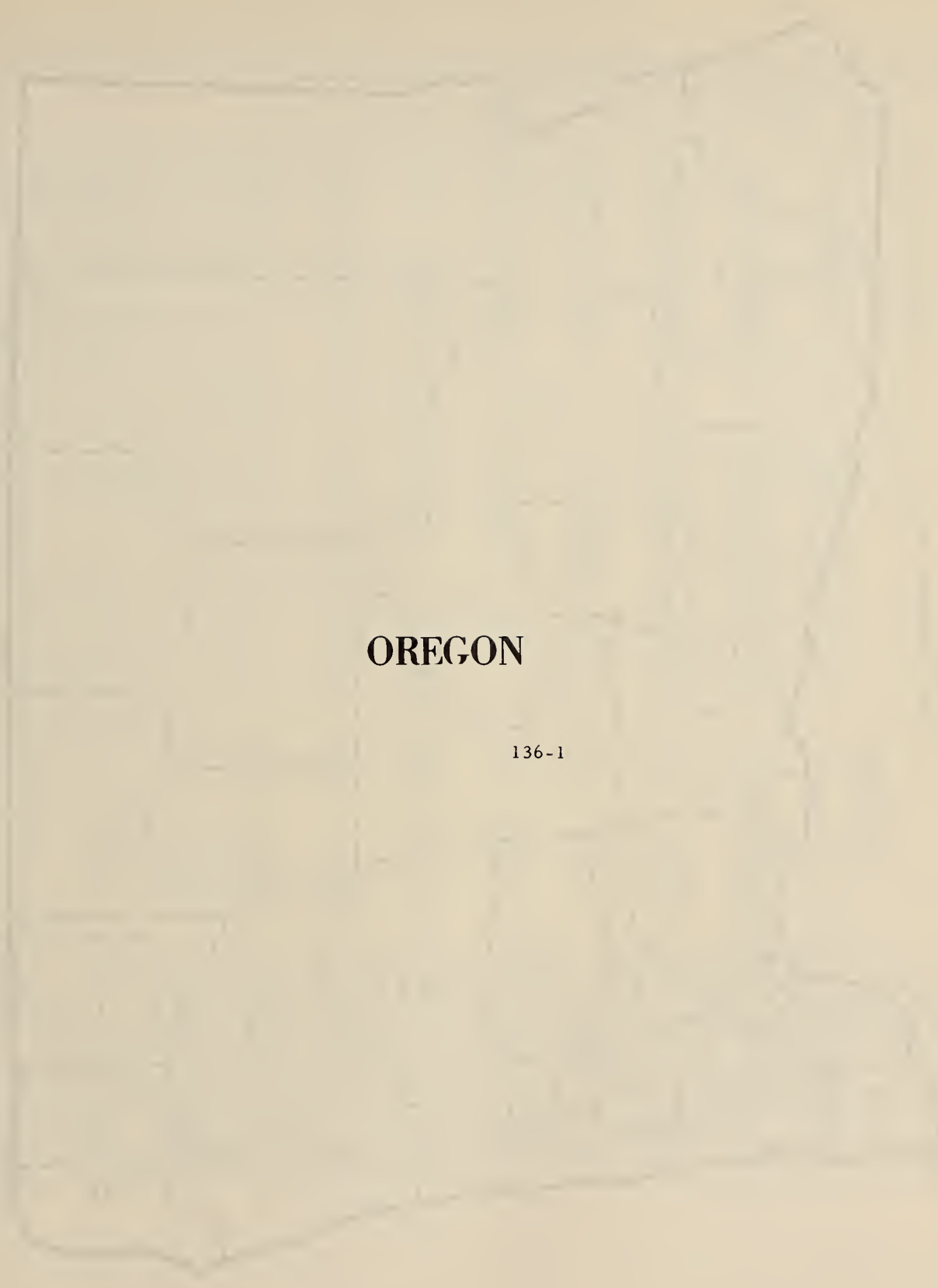
Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Oklahoma, all mineral operations:												
Including operations classified in manufactures	2,627	254	1,181	416	377	280	68	32	12	6	1	...
Mineral industries only	2,610	253	1,174	414	376	275	67	32	12	6	1	...
Metal mining, total	77	27	15	9	10	13	1	2	...	...	...	...
Lead and zinc ores:												
Valued chiefly for lead	19	6	4	2	5	2	...	...	...	...	...	...
Valued chiefly for zinc	54	21	8	6	5	11	1	2	...	...	...	...
Metal mining contract services	3	...	2	1	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	1	...	1	...	...	...	...	...	...	...	...	...
Bituminous coal mining, total	43	3	15	9	6	5	2	2	1	...	...	...
Bituminous coal	42	3	15	9	5	5	2	2	1	...	...	...
Bituminous coal mining contract services	1	...	...	...	1	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	2,389	210	1,105	380	339	252	57	28	11	6	1	...
Crude petroleum and natural gas	1,535	197	876	184	131	95	24	14	9	4	1	...
Natural gas liquids	75	...	5	13	23	25	7	2	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	425	4	71	104	128	87	18	10	2	1	...	...
Building, repairing, and dismantling rigs and derricks	10	...	4	1	3	2	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	344	9	149	78	54	43	8	2	...	1	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	118	14	46	18	22	10	8	...	...	...	...	...
Mineral industries only	101	13	39	16	21	5	7	...	...	...	...	...
Dimension stone:												
Limestone	1	...	...	1	...	...	...	...	...	...	...	...
Granite:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	2	...	...	...	...	...	...
Sandstone	2	1	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	19	...	4	1	5	3	6	...	...	...	...	...
Included in manufactures and wholesale trade	2	...	...	1	...	1	...	...	...	...	...	...
Stone, n.e.c	5	1	1	2	1	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	59	11	27	9	12	...	...	...	...	...	...	...
Glass sand	4	...	1	1	1	...	1	...	...	...	...	...
Foundry sand	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	1	...	...	...	1	...	...	...	...	...	...	...
Included in manufactures	12	1	7	1	1	2	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c	1	...	...	...	...	1	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	1	...	...	1	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels) mining:												
Gypsum:												
Classified in mineral industries	2	...	...	1	1	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	1	...	...	...	...	...
Native asphalt and bitumens	1	...	...	...	...	1	...	...	...	...	...	...
Pumice and pumicite	1	...	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Water intake (except mine water): Million gallons per production worker[3]	Water intake (except mine water): Gallons per dollar value added	Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons): Used	Mine water (mil. gallons): Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Oklahoma, total	30,294	[4]584,357	17,866	0.59	31	11,117	686	497	171,918	4	27	46	23
Metal mining and Bituminous coal mining, total	2,125	[4]14,601	501	0.24	34	39	480	496	8,439	([5])	74	...	26
Lead and zinc ores	984	5,465	455	0.46	83	1	230	292	7,808	([5])	71	...	29
Valued chiefly for lead	149	1,107	126	0.85	114	1	...	...	176	1	99	...	
Valued chiefly for zinc	835	4,358	329	0.39	75	...	230	292	7,632	...	60	...	40
Bituminous coal	1,112	8,854	46	0.04	5	38	250	4	631	...	100	...	...
Other industries	29	[4]282	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	27,163	[6]560,325	15,637	0.58	28	9,425	xxx	xxx	[7]160,697	4	18	58	20
Crude petroleum and Natural gas	13,431	433,563	11,921	0.89	27	8,864	xxx	xxx	(NA)	1	17	48	[8]34
Natural gas liquids	1,670	([6])	2,856	1.71	(NA)	500	xxx	xxx	147,962	8	11	81	...
Oil and gas field contract services:													
Drilling oil and gas wells	8,170	72,932	814	0.10	11	57	xxx	xxx	(NA)	5	39	18	[8]38
Building, repairing, and dismantling rigs and derricks	125	757	...	...	...	...	xxx	xxx	(NA)	...	...	...	...
Oil and gas field contract services, n.e.c	3,767	25,411	46	0.01	2	4	xxx	xxx	(NA)	11	79	...	[8]10
Nonmetallic minerals (except fuels) mining, total	1,006	9,431	1,728	1.72	183	1,713	206	1	2,782	5	50	9	36
Stone:													
Crushed and broken limestone	561	4,505	66	0.12	15	55	...	...	69	...	50	5	[9]45
Dimension stone and Other crushed and broken stone	34	428	113	3.32	264	113	...	...	191	75	...	...	25
Sand and gravel:													
Common sand and gravel	256	2,334	1,004	3.92	430	1,000	206	...	1,965	...	30	16	[9]54
Glass sand and Foundry sand	71	622	542	7.63	871	542	...	...	554	...	97	...	3
Other nonmetallic minerals (except fuels) mining	84	1,542	3	0.04	2	3	...	1	3	...	...	...	100

NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 8,828 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]Excludes figures for the uranium-radium-vanadium ores industry.
[5]Less than 0.5 percent.
[6]See table 2, footnote 6.
[7]For industries other than natural gas liquids, includes water intake only.
[8]Includes "not specified" as follows: for Crude petroleum and Natural gas, 6 percent; Drilling oil and gas wells, 31 percent; Oil and gas field contract services, n.e.c., 8 percent.
[9]Represents "not specified."



OREGON

136-1

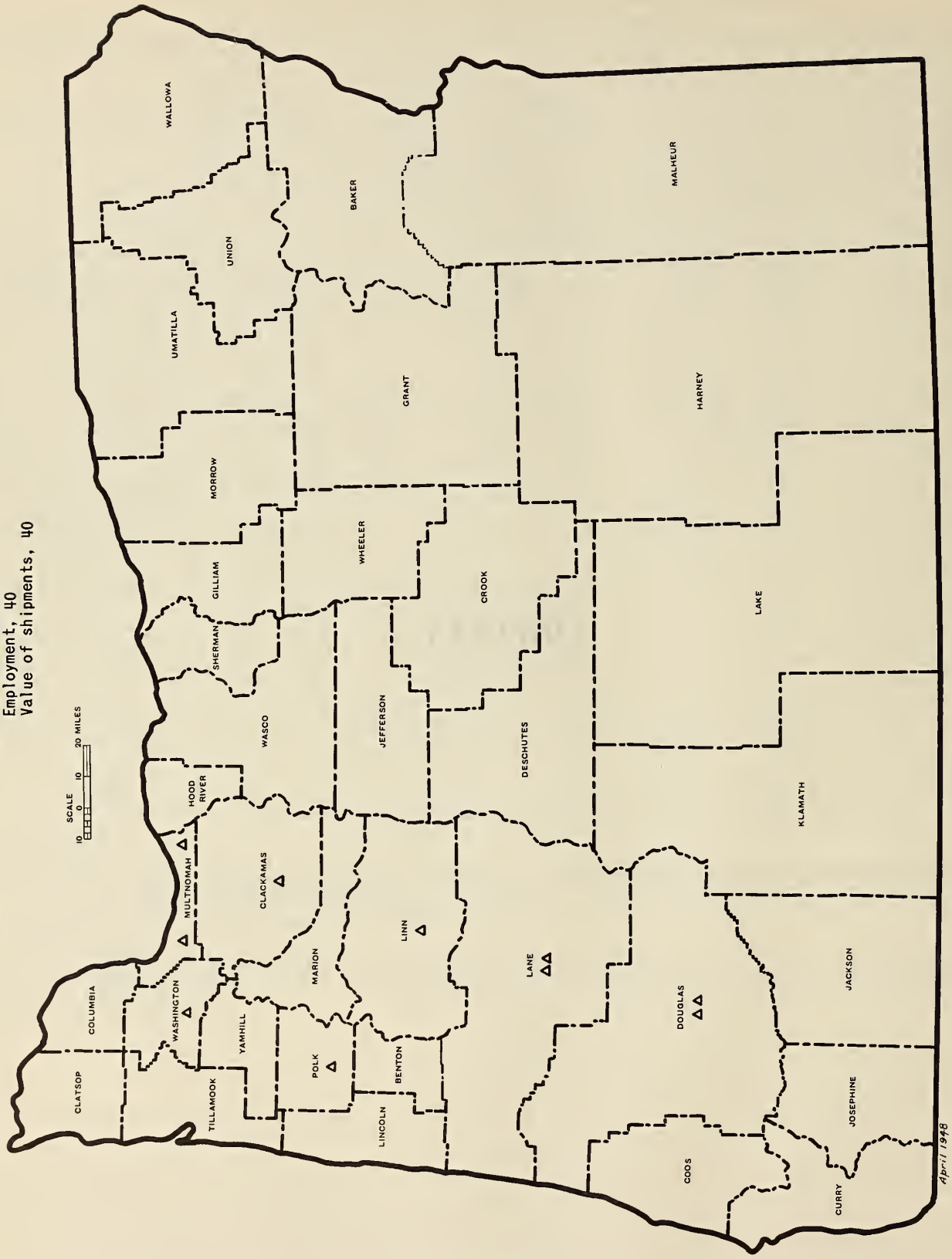

MINING IN OREGON: 1954
Rank among States:
Employment, 40
Value of shipments, 40
SCALE
0 10 20 MILES
WALLOWA
UNION
BAKER
MALHEUR
UMATILLA
GRANT
HARNEY
MORROW
GILLIAM
WHEELER
CROOK
LAKE
SHERMAN
WASCO
JEFFERSON
DESCHUTES
KLAMATH
HOOD RIVER
MULTNOMAH
CLACKAMAS
LINN
LANE
DOUGLAS
JACKSON
COLUMBIA
WASHINGTON
MARION
YAMHILL
POLK
BENTON
CLATSOP
TILLAMOOK
LINCOLN
COOS
JOSEPHINE
CURRY
April 1948
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING
EACH SYMBOL REPRESENTS 100 employees
VALUE ADDED PER MINING EMPLOYEE..... $8,800

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement and lime establishments					
	1954	1939[1]	1929[2]	1954	1939[3]	1929[4]	1919	1909	1902[5]
Number of operating companies	279	119	(NA)	145	[6]90	(NA)	(NA)	[6]235	[6]485
Number of establishments	296	(NA)	112	156	(NA)	94	56	236	(NA)
Number of mines and quarries	278	128	124	137	93	103	58	457	486
Number of oil and gas wells producing at end of year	...	...	(NA)	...	...	(NA)	...	...	...
Number of preparation plants	218	81	(NA)	108	50	(NA)	(NA)	(NA)	(NA)
Value of shipments[7]....$1,000	18,872	5,120	3,512	5,586	4,243	2,410	1,885	1,192	2,087
Value added in mining....do	13,168	3,807	2,529	3,476	3,156	1,582	1,106	731	1,343
Number of persons engaged, total	1,784	1,546	1,239	649	1,242	1,048	889	1,533	2,297
Production and development workers	1,331	1,309	1,087	447	1,071	946	776	1,158	[8]2,005
All other employees	156	167	[9]123	58	123	[9]84	75	160	292
Proprietors and firm members	297	70	[10]29	144	48	[10]18	38	215	(NA)
Performing manual labor	186	35	(NA)	103	29	(NA)	20	110	(NA)
Man-hours worked by production and development workers....1,000	2,690	2,672	(NA)	848	2,198	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000	13,192	3,268	2,791	5,169	2,680	2,315	1,970	1,642	2,934
Wages of production and development workers....do	5,718	1,627	1,544	1,712	1,338	1,329	1,039	995	1,839
Salaries of all other employees....do	828	328	[9]264	274	255	[9]158	152	186	351
Minerals received for preparation....do	66	(NA)	(NA)	66	(NA)	(NA)	...	...	(NA)
Supplies....do	[11]3,443	877	[12]606	1,180	762	[12]529	594	325	649
Purchased fuel....do	[11]947	258	[10]167	330	206	[10]127	70	115	
Purchased electric energy....do	[11]291	163	[10]99	107	106	[10]61	65		
Contract work....do	[11]1,899	15	111	1,561	13	111	50	21	95
Purchased machinery installed....do	[13]2,761		212	1,261		159	(NA)		
Capital expenditures, total....do	[13]3,703	(NA)	(NA)	2,395	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do	[13]271		726	233		726	320	(NA)	(NA)
Preparation plant construction....do	[13]849	87	(NA)	668	72	(NA)	(NA)		
Other construction....do	[13]733			674					
New machinery and equipment....do	[13]1,076	185		501	166				
Used plant and equipment....do	[13]774	50		319	40				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[13]141	33	15	48	18	10	6	13	[10]4
Per production worker	106	25	14	107	17	11	8	11	2
Prime movers....1,000	[13]116	21	7	42	13	5	2	11	[10]4
Electric motors driven by purchased energy....do	[13]25	12	8	6	5	5	4	2	...
Horsepower rating of electric motors driven by energy generated at establishment....do	([14])	3	([14])	([14])	3	3	([14])	2	[10]1
Energy used....million kwh equivalent	[13]349	143	[10]100	137	109	[10]70	(NA)		
Coal....1,000 short tons	[13]2	([14])	[10]1	2	([14])	[10]1	5		
Fuel oils....1,000 barrels	[13]103	66	[10]47	46	53	[10]32	7	(NA)	(NA)
Gas....million cu.ft	[13]56	...	...	...	15	...	...		
Electric energy purchased....million kwh	[13]24	11	[10]7	13	8	[10]5	(NA)		
Electric energy generated and used....do	[13]1	4	[10]1	1	4	[10]1	(NA)		

NA Not available. [1]Excludes data for dimension stone dressing operations, if any, in conjunction with one dimension trap rock quarry and one dimension sandstone quarry. [2]Excludes data for common clay and shale operations. There were 9 such mines in 1939 with products valued at $68,000. [3]Includes data for one or more stone quarries operated as part of cement plants. See also footnote 1. [4]Includes data for 3 stone quarries operated as part of cement plants. [5]Includes data for lime plants producing lime valued at $20,000. [6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry. [7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication. [8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period. [9]Excludes data for employees, if any, at central offices not included in reports for mining and mineral preparation establishments. [10]Represents producing establishments only. [11]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies. [12]Includes the cost of fuel and purchased electric energy for nonproducing establishments. Cost of supplies, fuel, and purchased electric energy for such operations was $184,000. [13]Excludes figures for crushed stone and clay operations classified in manufactures. [14]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Oregon, total		Metal mining, Bituminous coal mining, and Crude petroleum and natural gas extraction			
		Including operations classified in manufactures[1]	Mineral industries only	Total	Copper ores and Gold	Ferro-alloy ores, n.e.c. (Chromium and Nickel)	Other industries
1	Number of operating companies	279	264	91	29	39	23
2	Number of establishments	296	278	96	30	43	23
	Number of mines, quarries, and producing oil and gas wells:						
3	1954	278	260	80	30	35	15
4	1939	128	(NA)	59	48	1	10
5	Number of preparation plants	218	213	59	24	25	10
	Value of shipments:[2]						
6	1954 ..... $1,000	18,872	18,263	1,686	238	1,300	148
7	1939 ..... do	5,120	(NA)	[3]3,280	2,842	...	[3]438
8	Value added in mining ..... do	13,168	12,646	736	150	774	([4])
9	Number of persons engaged, total	1,784	1,732	278	89	141	48
10	Production and development workers	1,331	1,280	151	53	73	25
11	All other employees	156	156	21	5	12	4
12	Proprietors and firm members	297	296	106	31	56	19
13	Performing manual labor	186	185	83	25	42	16
	Man-hours worked by production and development workers:						
14	1954 1,000	2,690	2,588	283	99	136	48
15	1939 ..... do	2,672	(NA)	[3]1,587	[3]1,375	([3])	[3]212
	At mines:						
16	Underground ..... do	98	98	92	31	35	26
17	Open-pit ..... do	995	989	54	27	25	2
18	Surface (mine shops, yards, etc.) ..... do	168	76	71	32	34	5
19	At preparation plants ..... do	1,429	1,425	66	9	42	15
20	Man-hours spent on development and exploration work (included above) ..... do	84	84	75	31	34	10
21	Principal expenses designated below, total $1,000	13,192	12,862	2,663	332	1,792	539
22	Wages of production and development workers ..... do	5,718	5,485	501	154	260	87
23	Salaries of all other employees ..... do	828	828	124	10	90	24
24	Minerals received for preparation ..... do	66	66	61	...	61	...
25	Supplies ..... do	3,440	3,350	466	109	301	56
	Purchased fuel:						
26	Coal ..... do	15	15	4	...	...	4
27	Fuel oil ..... do	423	423	18	8	10	([7])
28	Gas ..... do	12	12	1	1	([7])	...
29	Other fuels ..... do	500	498	28	2	19	7
30	Purchased electric energy ..... do	291	290	47	36	6	5
31	Contract work ..... do	1,899	1,895	1,413	12	1,045	356
32	Purchased machinery installed ..... do	2,761	2,759	491	84	389	18
33	Capital expenditures, total ..... do	3,703	3,691	1,579	164	1,305	110
34	Development and exploration of mineral property ..... do	271	263	215	65	61	89
35	Preparation plant construction ..... do	849	849	302	29	273	...
36	Other construction ..... do	733	731	637	2	634	1
37	New machinery and equipment ..... do	1,076	1,074	307	10	282	15
38	Used plant and equipment ..... do	774	774	118	58	55	5
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	141	141	17	5	11	1
40	Per production worker	106	110	113	92	151	40
41	Prime movers 1,000	116	116	15	4	10	1
42	Electric motors driven by purchased energy ..... do	25	25	2	1	1	([7])
43	Horsepower rating of electric motors driven by energy generated at establishment ..... do	([7])	([7])	([7])	([7])	([7])	([7])
44	Energy used ..... million kwh equivalent	349	349	24	11	10	3
45	Coal ..... 1,000 short tons	2	1	([7])	...	...	([7])
46	Fuel oil ..... 1,000 barrels	103	103	3	([7])	2	1
47	Gas ..... million cu.ft	56	56	([7])	([7])	([7])	...
48	Electric energy purchased ..... million kwh	24	24	7	7	([7])	([7])
49	Electric energy generated and used ..... do	1	1	([7])	...	([7])	...
50	Water intake, including mine water used ..... million gallons	2,479	2,479	674	610	63	1
51	Per production worker ..... do	1.86	1.93	4.46	11.51	0.86	0.04

xxx Not applicable.
NA Not available.
[1]Includes one crushed stone quarry operated as part of a wholesale trade establishment.
[2]See table 1, footnote 7.
[3]Figures for one bituminous coal mine, and 4 nonproducing metal mines are included with those for Nonmetallic minerals (except fuels) mining.
[4]Not shown since the cost of supplies, purchased fuels and electric energy, contract work, and purchased machinery exceeds the value of shipments plus capital expenditure.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining										
Total		Dimension stone (including operations classified in manufactures)	Crushed and broken stone				Sand and gravel	Pumice and pumicite	Other industries (including operations classified in manufactures)	
				Mineral industries only						
Including operations classified in manufactures[1]	Mineral industries only		Including operations classified in manufactures[1]	Limestone	Trap rock	Granite, Sandstone, and Stone, n.e.c.				
188	173	4	39	5	24	8	118	6	24	1
200	182	4	46	5	30	8	120	6	24	2
198	180	4	44	4	30	7	121	6	23	3
69	(NA)	3	28	(NA)	22	2	31	1	6	4
159	154	2	39	5	25	7	104	5	9	5
17,186	16,577	52	3,204	282	2,126	402	12,340	277	1,313	6
[3]1,840	(NA)	(NA)	[3]862	(NA)	404	(NA)	857	(NA)	(NA)	7
12,432	11,910	48	2,412	223	1,583	277	8,932	236	804	8
1,506	1,454	15	290	30	198	34	1,066	26	109	9
1,180	1,129	12	246	26	169	23	817	18	87	10
135	135	1	14	...	12	2	96	3	21	11
191	190	2	30	4	17	9	153	5	1	12
103	102	1	16	1	11	4	83	2	1	13
2,407	2,305	23	470	49	318	47	1,709	33	172	14
[3]1,085	(NA)	(NA)	[3]426	(NA)	162	(NA)	469	(NA)	(NA)	15
6	6	...	...	...	...	...	...	...	6	16
941	935	11	149	10	127	12	709	13	59	17
97	5	8	58	...	2	...	...	1	30	18
1,363	1,359	4	263	39	189	35	1,000	19	77	19
9	9	...	...	...	...	...	3	...	6	20
10,529	10,199	51	1,921	167	1,311	229	7,457	140	960	21
5,217	4,984	37	1,071	109	692	121	3,697	71	341	22
704	704	1	54	...	47	7	544	4	101	23
5	5	...	...	...	...	...	(NA)	21	[5]306	24
[5]2,974	2,884	4	[5]515	23	352	75	2,133			25
11	11	([7])	...	...	...	...	11	...	...	26
[5]405	405	...	[5]79	3	62	14	184	...	[5]142	27
11	11	...	...	...	...	...	8	3	...	28
[5]472	470	3	[5]85	4	70	11	363	...	[5]21	29
[5]244	243	2	[5]30	4	25	1	179	([7])	[5]33	30
[5]486	482	4	[5]87	24	63	...	338	41	16	31
[6]2,270	2,268	3	[6]640	403	195	42	1,481	126	[6]20	32
[6]2,124	2,112	12	[6]644	402	224	18	1,289	150	[6]29	33
[6]56	48	8	[6]1	...	1	...	38	2	[6]7	34
[6]547	547	...	[6]361	317	44	...	181	3	[6]2	35
[6]96	94	2	[6]14	...	14	...	59	20	[6]1	36
[6]769	767	2	[6]153	19	117	17	575	39	...	37
[6]656	656	...	[6]115	66	48	1	436	86	[6]19	38
[6]124	124	([7])	[6]24	1	18	5	92	4	[6]4	39
105	110	xxx	98	37	107	217	113	221	[6]46	40
[6]101	101	([7])	[6]21	1	15	5	73	4	[6]3	41
[6]23	23	([7])	[6]3	([7])	3	([7])	19	([7])	[6]1	42
...	([7])	...	([7])	...	([7])	...	([7])	([7])	...	43
[6]325	325	...	[6]52	3	42	7	181	6	[6]86	44
[6]2	1	1	...	...	...	...	1	...	...	45
[6]100	100	...	[6]16	1	13	2	39	...	[6]45	46
[6]56	56	...	...	...	...	...	41	15	...	47
[6]17	17	([7])	[6]2	([7])	2	...	11	([7])	[6]4	48
[6]1	1	...	[6]1	...	1	...	...	...	...	49
1,805	1,805	...	65	...	8	57	1,738	...	2	50
1.53	1.60	...	0.26	...	0.05	3.56	2.13	...	2.48	51

[5]See table 1, footnote 11.
[6]See table 1, footnote 13.
[7]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Oregon, all mineral operations:									
Including operations in manufactures[2]	295	18,872	13,168	1,331	156	2,690	5,718	828	[3]2,929
Mineral industries only	278	18,263	12,646	1,280	156	2,588	5,485	828	2,917
Metal mining, Bituminous coal, and Crude petroleum and natural gas extraction[4]	96	1,686	736	151	21	283	501	124	1,461
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures[2]	200	17,186	12,432	1,180	135	2,407	5,217	704	[3]1,468
Mineral industries only	182	16,577	11,910	1,129	135	2,305	4,984	704	1,456
Dimension stone	4	52	48	12	1	23	37	1	12
Crushed and broken stone:									
Including operations in manufactures[2]	46	3,204	2,412	246	14	470	1,071	54	[3]529
Mineral industries only	43	2,810	2,083	218	14	414	922	54	529
Sand and gravel	120	12,340	8,932	817	96	1,709	3,697	544	853
Clay, ceramic, and refractory minerals, Chemical and fertilizer mineral mining, and Miscellaneous nonmetallic minerals (except fuels) (including operations in manufactures)	30	1,590	1,040	105	24	205	412	105	74
COUNTY									
Baker (mineral industries only)	14	451	323	61	4	125	237	7	346
Benton (mineral industries only)	5	147	110	13	3	23	52	6	59
Clackamas (mineral industries only)	14	719	621	63	7	112	221	20	72
Sand and gravel	11	666	570	50	7	91	187	20	65
Clatsop	5	259	200	20	4	35	88	14	23
Columbia	4	191	172	18	2	30	69	10	8
Coos	9	134	105	13	3	22	53	21	47
Nonmetallic minerals (except fuels) mining	5	129	100	13	3	22	53	9	20
Curry	11	304	211	19	1	44	87	3	69
Deschutes	7	1,059	628	59	22	118	241	95	59
Douglas, total	19	3,104	2,161	188	9	414	943	126	1,296
Metal mining	10	799	464	39	3	73	148	72	1,162
Nonmetallic minerals (except fuels) mining	9	2,305	1,697	149	6	341	795	54	134
Grant	8	218	185	23	1	35	51	...	18
Jackson (mineral industries only)	19	443	323	38	1	72	150	12	44
Nonmetallic minerals (except fuels) mining (mineral industries only)	5	392	295	31	3	65	137	13	29
Josephine, total	30	448	258	51	2	97	196	7	85
Metal mining	26	296	186	37	2	67	137	7	78
Sand and gravel	4	152	72	14	...	30	59	...	7
Lane, total	21	2,036	1,360	151	3	296	720	30	195
Crushed and broken stone	8	382	238	25	1	42	123	4	19
Sand and gravel	13	1,654	1,122	126	2	254	597	26	176
Lincoln	6	472	312	37	...	70	132	...	27
Linn	13	965	671	63	7	121	266	32	124
Marion (mineral industries only)	7	683	593	32	14	71	135	74	29
Multnomah (mineral industries only)	16	3,140	2,047	160	14	349	811	111	145
Polk	7	808	558	75	8	173	305	32	56
Umatilla	6	666	561	26	9	50	98	45	...
Union	5	118	89	12	...	22	44	...	2
Washington (mineral industries only)	8	688	532	52	4	165	164	37	84
Yamhill (mineral industriea only)	6	184	131	21	...	43	62	...	...

[1]See table 1, footnote 7.
[2]See table 2, footnote 1.
[3]See table 1, footnote 13.
[4]With the exception of figures for one establishment, data for the Crude petroleum and natural gas extraction industries were not distributed by county.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Oregon, total	Baker	Benton	Clackamas	Clatsop	Columbia	Coos	Crook	Curry	Deschutes	Douglas	Grant
All operations, total	297	16	6	16	5	5	9	7	11	7	19	8
Classified in mineral industries	278	14	5	14	5	4	9	7	11	7	19	8
Included in manufactures[1]	19	2	1	2	...	1	...	...	...	...	...	...
Metal mining:												
Copper ores	3	1	...	...	...	...	...	...	...	...	...	1
Lode gold	14	5	...	...	...	...	...	...	...	...	...	2
Placer gold	13	3	...	...	...	...	...	...	...	...	2	...
Bauxite	1	...	...	...	...	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Chromium ores	42	...	...	...	...	...	2	...	8	...	5	3
Nickel ores	1	...	...	...	...	...	...	...	...	...	1	...
Metal mining contract services	1	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:												
Mercury ores	13	...	...	...	...	...	...	4	...	...	2	1
Metallic ores, n.e.c	1	...	...	...	...	...	...	1	...	...	...	...
Bituminous coal	1	...	...	...	...	...	1	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[2]	4	...	...	...	...	...	1	...	...	...	...	...
Oil and gas field contract services	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Granite:												
Classified in mineral industries	1	1	...	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...	...	...
Trap rock	1	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c. (included in manufactures)	1	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	5	1	...	...	...	...	...	...	...	...	...	...
Included in manufactures	3	1	...	...	...	...	...	...	...	...	...	...
Granite	1	...	...	...	...	...	...	...	...	...	...	...
Trap rock:												
Classified in mineral industries	30	...	1	2	2	1	3	...	...	...	2	...
Included in wholesale trade	1	...	...	...	...	1	...	...	...	...	...	...
Sandstone	2	1	...	...	...	...	...	...	1	...	...	...
Stone, n.e.c	5	1	...	...	1	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	119	1	4	11	2	1	2	2	2	1	7	1
Foundry sand	1	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Kaolin and ball clay (included in manufactures)	1	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	5	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	12	1	1	2	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	3	...	...	1	...	2	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Pumice and pumicite	6	...	...	...	...	...	...	...	...	5	...	...
Diatomite and perlite	3	...	...	...	...	...	...	...	...	1	...	...

NA Not available. [1]See table 2, footnote 1. [2]See table 3, footnote 4.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Harney	Hood River	Jackson	Jefferson	Josephine	Klamath	Lake	Lane	Lincoln	Linn	Malheur	Marion
All operations, total	2	1	23	2	30	4	4	21	6	13	5	8
Classified in mineral industries	2	1	19	1	30	4	4	21	6	13	4	7
Included in manufactures[1]	...	...	4	1	...	...	...	...	...	...	1	1
Metal mining:												
Copper ores	...	...	...	...	1	...	...	...	...	...	...	...
Lode gold	...	...	5	...	2	...	...	...	...	...	...	...
Placer gold	...	...	4	...	2	...	...	...	...	...	...	...
Bauxite	...	...	...	...	...	...	...	...	...	...	...	1
Ferro-alloy ores, except vanadium:												
Chromium ores	...	...	4	...	20	...	...	...	...	...	...	...
Nickel ores	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:												
Mercury ores	...	...	1	1	1	...	1	...	...	...	1	...
Metallic ores, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[2]	...	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Dimension stone:												
Granite:												
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	1	...	...	...	...	...	...	...	...
Trap rock	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c. (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	...	...	...	...	...	...	...	1	...	...	...	...
Included in manufactures	...	...	2	...	...	...	...	...	...	...	...	...
Granite	...	...	1	...	...	...	...	...	...	...	...	...
Trap rock:												
Classified in mineral industries	...	...	...	...	...	...	1	6	4	1	1	...
Included in wholesale trade	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	...	...	...	1	...	...	...	...
Sand and gravel:												
Common sand and gravel	1	1	4	...	4	3	2	13	2	12	...	6
Foundry sand	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Kaolin and ball clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	...	...	...	...	...	1	...	...	...	...	...	...
Included in manufactures	...	...	2	...	...	...	...	...	...	...	1	1
Chemical and fertilizer mineral mining, n.e.c	...	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Pumice and pumicite	1	...	...	...	...	...	...	...	...	...	...	...
Diatomite and perlite	...	...	...	...	...	...	...	...	...	...	2	...

NA Not available. [1]See table 2, footnote 1. [2]See table 3, footnote 4.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Multnomah	Polk	Sherman	Tillamook	Umatilla	Union	Wallow	Wasco	Washington	Wheeler	Yamhill
All operations, total	18	7	1	1	6	5	3	5	9	1	8
Classified in mineral industries	16	7	1	1	6	5	3	4	8	1	6
Included in manufactures[1]	2	...	...	...	...	...	...	1	1	...	2
Metal mining:											
Copper ores	...	...	...	...	...	...	...	...	...	...	...
Lode gold	...	...	...	...	...	...	...	...	...	...	...
Placer gold	...	...	...	...	...	1	...	...	...	1	...
Bauxite	...	...	...	...	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:											
Chromium ores	...	...	...	...	...	...	...	...	...	...	...
Nickel ores	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	1	...	...
Miscellaneous metal ores:											
Mercury ores	...	...	...	...	...	...	...	...	1	...	...
Metallic ores, n.e.c	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:											
Crude petroleum and natural gas[2]	...	...	...	...	...	...	...	...	...	...	...
Oil and gas field contract services	(NA)	(NA)	NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:											
Dimension stone:											
Granite:											
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Trap rock	1	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c. (included in manufactures)	...	...	...	...	...	...	...	1	...	...	...
Crushed and broken stone:											
Limestone:											
Classified in mineral industries	1	1	...	...	...	...	1	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...
Trap rock:											
Classified in mineral industries	1	1	...	...	...	...	...	2	1	...	1
Included in wholesale trade	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c	...	...	...	...	1	...	...	...	...	...	1
Sand and gravel:											
Common sand and gravel	11	4	1	1	5	3	2	2	4	...	4
Foundry sand	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:											
Kaolin and ball clay (included in manufactures)	...	...	...	...	...	...	...	...	...	...	1
Clay, ceramic, and refractory minerals, n.e.c.:											
Classified in mineral industries	2	...	...	...	...	1	...	...	1	...	...
Included in manufactures	2	...	...	...	...	...	...	...	1	...	1
Chemical and fertilizer mineral mining, n.e.c	...	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):											
Pumice and pumicite	...	...	...	...	...	...	...	...	...	...	...
Diatomite and perlite	...	...	...	...	...	...	...	...	...	...	...

NA Not available. [1]See table 2, footnote 1. [2]See table 3, footnote 4.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Oregon, all mineral operations:												
Included in manufactures and wholesale trade	296	79	123	49	32	9	4	...	...	...	...	...
Mineral industries only	278	77	111	47	30	9	4	...	...	...	...	...
Metal mining, total	89	49	31	5	3	1	...	...	...	...	...	...
Copper ores	3	...	3	...	...	...	...	...	...	...	...	...
Gold and silver ores:												
Lode gold	14	7	4	3	...	...	...	...	...	...	...	...
Placer gold	13	11	1	...	1	...	...	...	...	...	...	...
Bauxite	1	...	1	...	...	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Chromium ores	42	23	16	2	1	...	...	...	...	...	...	...
Nickel ores	1	...	...	...	...	1	...	...	...	...	...	...
Metal mining contract services	1	...	1	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:												
Mercury ores	13	7	5	...	1	...	...	...	...	...	...	...
Metallic ores, n.e.c	1	1	...	...	...	...	...	...	...	...	...	...
Bituminous coal	1	1	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	6	5	1	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas	4	3	1	...	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	2	2	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures and wholesale trade	200	24	91	44	29	8	4	...	...	...	...	...
Mineral industries only	182	22	79	42	27	8	4	...	...	...	...	...
Dimension stone:												
Granite:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Trap rock	1	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c. (included in manufactures)	1	1	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	5	1	3	...	1	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	2	...	...	...	...	...	...	...
Granite	1	1	...	...	...	...	...	...	...	...	...	...
Trap rock:												
Classified in mineral industries	30	3	9	13	4	1	...	...	...	...	...	...
Included in wholesale trade	1	...	...	1	...	...	...	...	...	...	...	...
Sandstone	2	1	...	1	...	...	...	...	...	...	...	...
Stone, n.e.c	5	...	3	2	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	119	11	55	22	21	7	3	...	...	...	...	...
Foundry sand	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Kaolin and ball clay (included in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	5	...	3	1	1	...	...	...	...	...	...	...
Included in manufactures	12	1	11	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	3	2	...	1	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels) mining:												
Pumice and pumicite	6	1	3	2	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c	3	2	...	...	...	...	1	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Oregon, total	1,280	12,646	1,830	1.43	145	1,823	649	80	2,536	25	32	14	29
Metal mining, Bituminous coal, and Crude petroleum and natural gas extraction, total	151	736	59	0.38	78	57	615	79	674	18	68	...	14
Copper ores and Gold	53	150	3	0.06	20	3	607	52	610	...	...	...	[1]100
Ferro-alloy ores, n.e.c.	73	774	56	0.77	72	54	7	7	63	19	72	...	9
Other industries	25	([2])	...	...	...	...	1	20	1	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	1,129	11,910	1,771	1.57	149	1,766	34	1	1,862	25	31	15	29
Crushed and broken stone:													
Limestone	26	223	...	...	...	...	...	...	...	...	...	...	...
Trap rock	169	1,583	6	0.04	4	1	2	1	8	...	83	...	[3]17
Granite, Sandstone, and Stone, n.e.c.	23	277	57	2.48	206	57	...	...	57	...	...	...	[1]100
Sand and gravel	817	8,932	1,706	2.09	191	1,705	32	...	1,789	26	32	15	[1]27
Other industries	94	895	2	0.02	2	3	...	...	8	67	...	33	...

[1]Represents "not specified" as follows: for Copper ores and Gold, 3 percent; for Crushed and broken Granite, Sandstone, and Stone, n.e.c., 57 percent; Sand and gravel, 19 percent.

[2]See table 2, footnote 4.

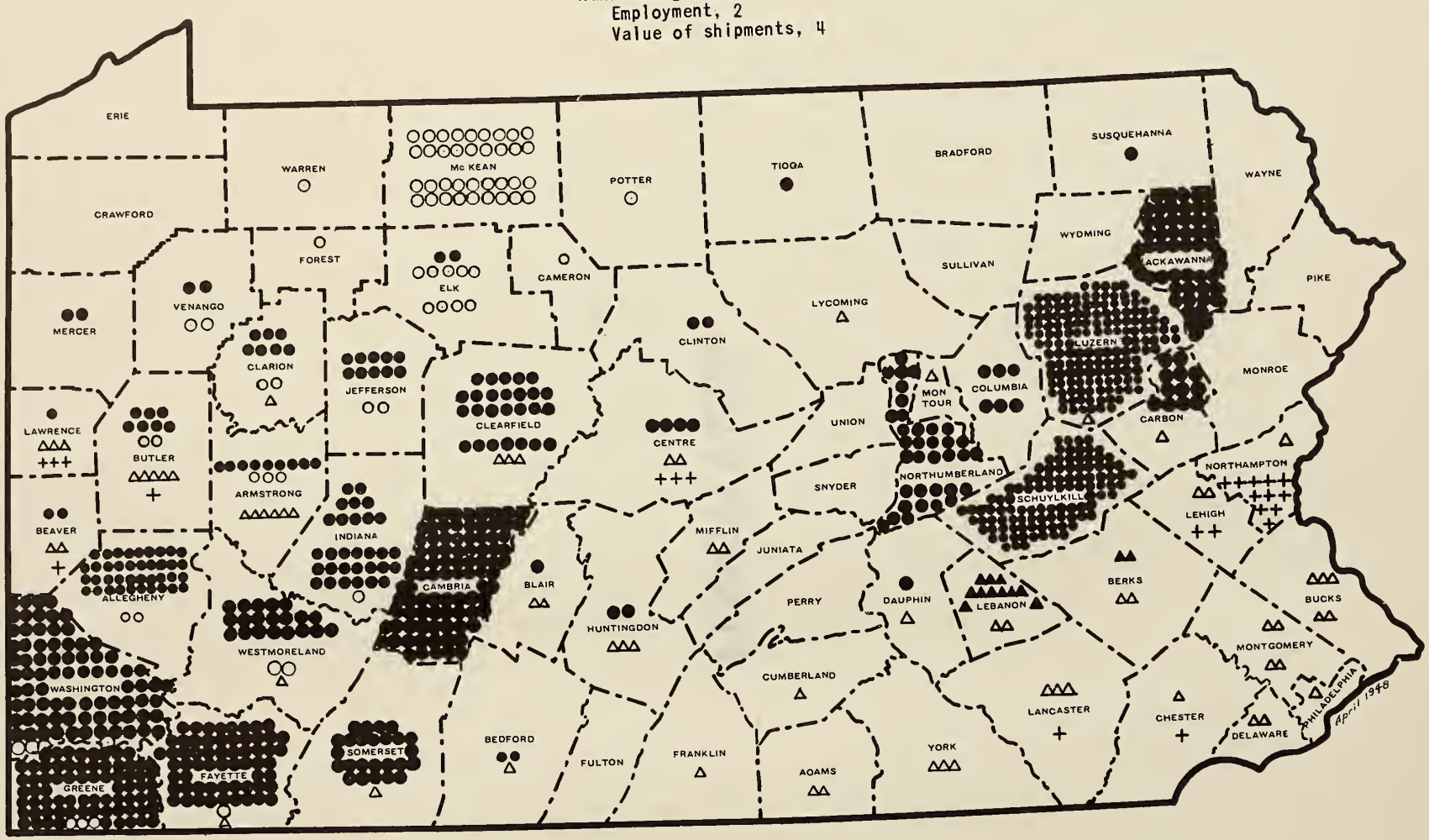
[3]Represents "not specified."

PENNSYLVANIA

137-1

MINING IN PENNSYLVANIA: 1954

Rank among States:
Employment, 2
Value of shipments, 4



▲ METAL MINING
● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
Δ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

SCALE
20 0 20 MILES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$6,200
COAL MINING	5,600
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	8,300
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	8,400

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries		
	1954	1939[1]	1919[2]	1909[2]	1902[3]	1954	1939[1]	1929[4]
Number of operating companies	4,181	2,672	(NA)	[5]4,882	[5]12,265	3,107	1,736	(NA)
Number of establishments	4,679	(NA)	5,820	5,287	(NA)	3,574	(NA)	1,819
Number of mines and quarries	3,368	2,296	3,631	3,021	2,825	3,370	2,296	2,201
Number of oil and gas wells producing at end of year	66,527	65,484	77,325	59,780	43,011	xxx	xxx	xxx
Number of preparation plants	644	663	(NA)	(NA)	(NA)	633	663	(NA)
Value of shipments[6]....$1,000	1,078,975	473,888	819,451	349,060	226,648	989,713	425,021	694,975
Value added in mining....do	[7]654,038	384,397	659,235	288,254	191,911	589,269	343,494	581,276
Number of persons engaged, total	113,779	209,300	350,490	382,370	194,772	104,437	199,421	290,796
Production and development workers	96,449	193,458	323,507	361,398	[8]185,603	89,482	186,005	276,500
All other employees	11,318	13,308	18,143	11,738	9,169	10,502	11,848	[9]13,383
Proprietors and firm members	6,012	2,534	8,840	9,234		4,453	1,568	913
Performing manual labor	3,883	1,268	2,129	2,119	(NA)	3,334	925	(NA)
Man-hours worked by production and development workers....1,000	157,581	296,599	(NA)	(NA)		143,711	283,052	(NA)
Principal expenses designated below, total....$1,000	843,062	365,637	640,560	271,567	155,815	779,618	344,515	551,441
Wages of production and development workers....do	351,200	245,270	445,353	197,681	111,732	327,060	235,798	403,965
Salaries of all other employees....do	60,754	30,876	34,991	13,080	9,346	57,209	27,190	[9]33,777
Minerals received for preparation....do	[7]176,609	(NA)	[10]5,510	3,099	(NA)	176,528	(NA)	(NA)
Supplies....do	[11]120,152	51,090	118,984	45,269		[11]109,431	49,060	77,602
Purchased fuel[12]....do	[11]13,781	8,183	21,820	6,427	29,103	[11]12,167	6,318	11,503
Purchased electric energy....do	[11]24,510	14,205	5,890			[11]23,020	14,008	17,105
Contract work....do	[11]96,056	16,013	8,012	6,011	5,634	[11]74,203	12,141	7,489
Purchased machinery installed....do	[13]53,006		(NA)			[13]46,274		15,801
Capital expenditures, total....do	[13]59,177	(NA)				[13]41,179	(NA)	(NA)
Development and exploration of mineral property....do	[13]12,058		25,232	(NA)	(NA)	[13]3,033		13,539
Preparation plant construction....do	[13]5,885	3,614				[13]5,880	3,493	
Other construction....do	[13]5,178		(NA)			[13]3,855		(NA)
New machinery and equipment....do	[13]28,484	12,802				[13]21,765	10,200	
Used plant and equipment....do	[13]7,572	1,302				[13]6,646	1,183	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[13]4,120	2,396	2,000	1,621	1,180	[13]3,726	2,196	2,189
Per production worker	43	12	6	4	6	42	12	8
Prime movers....1,000	[13]2,188	1,020	1,639	1,606	1,179	[13]1,850	828	873
Electric motors driven by purchased energy....do	[13]1,932	1,376	361	15	1	[13]1,876	1,368	1,316
Horsepower rating of electric motors driven by energy generated at establishment....do	[13]156	596	471	172	32	[13]155	594	567
Energy used....million kwh equivalent	[13]15,393	27,720	(NA)			[13]13,480	25,621	54,364
Coal[14]....1,000 short tons	[13]1,167	3,164	13,163			[13]1,167	3,163	7,051
Fuel oils[14]....1,000 barrels	[13]1,307	214	2			[13]1,276	195	55
Gas[14]....million cu.ft	[13]5,564	6,676	10,047	(NA)	(NA)	[13]294	79	106
Electric energy purchased....million kwh	[13]1,866	1,253	(NA)			[13]1,769	1,240	1,279
Electric energy generated and used....do	[13]178	601	(NA)			[13]177	596	601

xxx Not applicable.
NA Not available.

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing granite, slate, and sandstone at such operations was $924,000; this value has been included in the value of shipments and value added in mining. The comparable value for basalt, if any, is not available. For "Comparative statistics excluding the Crude petroleum and natural gas extraction industries" includes data for one nonproducing crude petroleum and natural gas establishment.

[2]Excludes data for sand, gravel, and common clay and shale operations and for crushed stone quarries operated as part of cement or lime establishments. For 1939, the census included 64 sand and gravel operations with products valued at $6,619,000; 59 common clay and shale pits with products valued at $560,000; and 48 such stone quarries with products valued at $4,525,000.

[3]Includes data for lime plants producing lime valued at $1,430,000.

[4]Excludes data for common clay and shale operations. There were 59 such mines in 1939 with products valued at $560,000.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]No data were obtained for the value of gas received for processing at natural gas liquids plants or for the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a resonable relationship to other statistics shown.

[8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[10]Includes purchases for resale without further processing.

[11]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[12]For 1954, represents purchased fuels used. For 1939, includes the value of fuels produced and used in the same establishment.

[13]Excludes statistics for crushed stone and clay operations classified in manufactures.

[14]Represents purchased fuels and fuels produced and used at the same establishment.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Pennsylvania, total		Metal mining	Anthracite mining			
		Including operations classified in manufactures	Mineral industries only		Total	Anthracite	Anthracite stripping contract services	Anthracite contract services, except stripping
1	Number of operating companies	4,181	4,076	6	1,296	1,160	131	13
2	Number of establishments	4,681	4,538	7	1,436	1,291	132	13
	Number of mines, quarries, and producing oil and gas wells:							
3	1954	69,895	69,752	3	[1]1,263	[1]1,263	xxx	xxx
4	1939	67,780	(NA)	4	[1]518	[1]518	xxx	xxx
5	Number of preparation plants	622	591	4	196	196	xxx	xxx
	Value of shipments:[6]							
6	1954....$1,000	1,078,975	1,050,065	18,234	408,431	365,536	42,048	847
7	1939....do	473,888	(NA)	[7]4,834	[8]201,126	[8]189,648	10,936	542
8	Value added in mining....do	654,038	631,703	9,904	196,835	167,090	29,079	666
9	Number of persons engaged, total	113,779	111,145	1,587	39,800	34,970	4,682	148
10	Production and development workers	96,449	93,897	1,374	33,026	28,823	4,074	129
11	All other employees	11,318	11,255	213	4,436	3,946	482	8
12	Proprietors and firm members	6,012	5,993	...	2,338	2,201	126	11
13	Performing manual labor	3,883	3,872	...	2,065	1,985	72	8
	Man-hours worked by production and development workers:							
14	1954....1,000	157,581	152,445	2,602	48,266	42,061	6,038	167
15	1939....do	296,599	(NA)	[7]1,909	124,462	120,085	4,038	339
	At mines:							
16	Underground....do	84,476	84,019	954	27,958	27,844	xxx	114
17	Open-pit....do	25,025	21,195	...	7,721	1,903	5,818	xxx
18	Surface (mine shops, yards, etc.)....do	[15]9,068	[15]9,062	997	6,600	6,327	220	53
19	At preparation plants....do	[15]25,203	[15]24,360	651	5,987	5,987	xxx	xxx
20	At oil and gas field operations	13,809	13,809	xxx	xxx	xxx	xxx	xxx
21	Man-hours spent on development and exploration work (included above)....do	5,981	5,973	...	441	441	(NA)	(NA)
22	Principal expenses designated below, total....$1,000	843,062	827,047	15,916	348,749	318,733	29,357	659
23	Wages of production and development workers....do	351,200	342,053	5,911	113,932	98,678	14,809	445
24	Salaries of all other employees....do	60,754	60,480	1,238	21,997	19,392	2,571	34
25	Minerals received for preparation....do	176,609	176,598	1,385	119,848	119,848	xxx	xxx
26	Supplies....do	[12]120,152	113,761	2,805	29,027	20,224	8,651	152
	Purchased fuel:							
27	Coal....do	[12]1,500	1,466	184	590	574	16	...
28	Fuel oil....do	[12]6,305	6,297	139	1,709	520	1,165	24
29	Gas....do	[12]971	962	([14])	2	...	2	...
30	Other fuels....do	[12]5,005	4,978	62	1,631	944	685	2
31	Purchased electric energy....do	[12]24,510	24,408	988	8,787	8,397	390	...
32	Contract work....do	[12]96,056	96,044	3,204	51,226	50,156	1,068	2
33	Purchased machinery installed....do	[13]53,006	52,958	1,371	9,270	5,667	3,529	74
34	Capital expenditures, total....do	[13]59,177	59,110	1,808	10,494	7,884	2,537	73
35	Development and exploration of mineral property....do	[13]12,058	12,040	186	1,438	1,438	xxx	xxx
36	Preparation plant construction....do	[13]5,885	5,885	466	1,281	1,281	xxx	xxx
37	Other construction....do	[13]5,178	5,178	328	960	867	93	...
38	New machinery and equipment....do	[13]28,484	28,454	806	4,767	3,367	1,371	29
39	Used plant and equipment....do	[13]7,572	7,553	22	2,048	931	1,073	44
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[13]4,120	4,105	49	1,506	1,072	433	1
41	Per production worker	43	44	36	46	37	106	11
42	Prime movers....1,000	[13]2,188	2,179	9	703	319	383	1
43	Electric motors driven by purchased energy....do	[13]1,932	1,926	40	803	753	50	...
44	Horsepower rating of electric motors driven by energy generated at establishment....do	[13]156	156	...	103	86	17	...
45	Energy used....million kwh equivalent	[13]15,393	15,345	387	7.198	6,589	602	7
	Produced and used for fuel at same establishment:							
46	Coal....1,000 short tons	799	799	xxx	595	595	xxx	xxx
47	Crude petroleum....1,000 barrels	1	1	xxx	xxx	xxx	xxx	xxx
48	Natural gas....million cu.ft	3,215	3,215	xxx	xxx	xxx	xxx	xxx
	Purchased fuel:							
49	Coal....1,000 short tons	[13]368	364	33	143	141	2	...
50	Fuel oil....1,000 barrels	[13]1,306	1,306	32	334	101	229	4
51	Natural gas....million cu.ft	[13]2,349	2,326	1	1	...	1	...
52	Electric energy purchased....million kwh	[13]1,866	1,862	65	731	708	23	...
53	Electric energy generated and used....do	[13]178	178	...	109	94	15	...
54	Water intake, including mine water used....million gallons	[13]69,945	69,935	317	27,214	27,206	8	...
55	Per production worker....do	0.73	0.74	0.23	0.82	0.94	([14])	...

See footnotes at end of table.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Bituminous coal mining			Crude petroleum and natural gas extraction							Nonmetallic minerals (except fuels) mining, total		
							Oil and gas field contract services					
Total	Bituminous coal	Bituminous coal mining contract services	Total	Crude petroleum	Natural gas	Natural gas liquids	Drilling oil and gas wells	Building, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Including operations classified in manufactures	Mineral industries only	
1,398	1,341	62	1,075	637	259	6	132	4	49	420	313	1
1,607	1,545	62	1,105	642	268	10	132	4	49	526	383	2
1,581	1,581	xxx	66,527	49,808	16,208	xxx	463	...	48	521	378	3
1,272	1,272	xxx	65,484	[2]49,693	[3]15,791	xxx	(4)	(4)	(4)	502	(NA)	4
96	96	...	11	...	...	11	...	...	...	315	284	5
454,632	446,866	7,766	89,262	30,047	37,103	405	9,387	102	12,218	108,416	79,506	6
[8]189,193	[8]188,925	[9]268	48,867	[2]29,188	[3]15,905	594	2,667	42	471	[7]29,868	(NA)	7
300,452	294,970	5,482	[10]64,769	13,316	33,858	(10)	7,039	99	10,285	82,078	59,743	8
53,006	52,217	789	9,342	4,347	2,333	37	1,142	26	1,457	10,044	7,410	9
46,295	45,633	662	6,967	3,043	1,568	37	914	22	1,383	8,787	6,235	10
4,924	4,864	60	816	323	428	...	42	...	23	929	866	11
1,787	1,720	67	1,559	981	337	...	186	4	51	328	309	12
1,109	1,064	45	549	316	100	...	105	2	26	160	149	13
74,440	73,135	1,305	13,870	5,868	2,978	61	2,073	32	2,858	18,403	13,267	14
140,087	139,930	[9]157	13,547	[2]8,073	[3]3,494	219	1,658	19	84	[7]16,594	(NA)	15
53,803	53,803	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	1,761	1,304	16
7,863	6,714	1,149	xxx	xxx	xxx	xxx	xxx	xxx	xxx	9,441	5,611	17
12,774	12,618	156	xxx	xxx	xxx	xxx	xxx	xxx	xxx	1,315	1,309	18
		xxx	61	...	...	61	xxx	xxx	xxx	5,886	5,043	19
xxx	xxx	xxx	13,809	5,868	2,978	xxx	2,073	32	2,858	xxx	xxx	20
231	231	(NA)	5,191	365	500	(NA)	1,796	32	2,498	118	110	21
352,170	347,106	5,064	[10]63,444	29,613	19,234	[10]270	6,049	61	8,136	62,783	46,768	22
175,686	173,029	2,657	24,140	9,559	5,122	106	3,225	58	6,070	31,531	22,384	23
28,922	28,635	287	3,545	1,729	1,565	...	155	...	96	5,052	4,778	24
55,096	55,096	xxx	[10]10,802	xxx	xxx	[10]81	...	...	...	199	188	25
58,896	57,711	1,185		3,253	3,432		2,170	...	1,785	[12]18,703	12,312	26
366	366	...	2	...	(14)	...	2	...	...	[12]358	324	27
3,272	2,864	408	174	63	36	...	63	...	12	[12]1,011	1,003	28
50	50	...	875	636	81	56	56	...	46	[12]44	35	29
1,522	1,344	178	563	242	112	...	168	3	38	[12]1,227	1,200	30
10,898	10,887	11	1,490	1,322	66	9	10	...	83	[12]2,347	2,245	31
17,462	17,124	338	21,853	12,809	8,820	18	200	...	6	[12]2,311	2,299	32
28,901	27,482	1,419	6,732	1,240	3,850	27	861	...	754	[13]6,732	6,684	33
22,283	21,028	1,255	17,998	2,834	13,152	39	1,182	...	791	[13]6,594	6,527	34
927	927	xxx	9,025	1,400	7,451	xxx	172	...	2	[13]482	464	35
2,959	2,959	xxx	5	xxx	xxx	5	xxx	xxx	xxx	[13]1,174	1,174	36
2,066	2,054	12	1,323	80	1,214	xxx	7	...	22	[13]501	501	37
12,296	11,342	954	6,719	978	4,145	34	926	...	636	[13]3,896	3,866	38
4,035	3,746	289	926	376	342	...	77	...	131	[13]541	522	39
1,701	1,628	73	394	217	88	3	63	...	23	[13]470	455	40
37	36	110	57	71	56	70	69	...	17	53	73	41
830	759	71	338	171	82	2	63	...	20	[13]308	299	42
871	869	2	56	46	6	1	...	...	3	[13]162	156	43
48	48	...	1	(14)	...	...	1	...	...	[13]4	4	44
4,565	4,392	173	1,913	1,239	447	57	115	1	54	[13]1,330	1,282	45
204	204	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
xxx	xxx	xxx	1	1	...	...	...	...	...	xxx	xxx	47
xxx	xxx	xxx	3,215	1,969	1,199	40	7	...	...	xxx	xxx	48
70	70	...	(14)	...	(14)	...	(14)	...	...	[13]63	59	49
687	612	75	30	13	4	...	11	...	2	[13]223	223	50
228	228	...	2,055	1,507	125	144	170	...	109	[13]64	41	51
834	834	(14)	97	84	5	1	(14)	...	7	[13]139	135	52
67	67	...	1	1	...	...	(14)	...	...	[13]5	5	53
4,358	4,308	50	8,217	7,493	11	491	221	...	1	[13]29,839	29,829	54
0.09	0.09	0.08	1.18	2.46	0.01	13.27	0.24	...	(14)	3.40	4.78	55

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Nonmetallic minerals (except fuels) mining—Continued							
		Dimension stone							
		Total		Limestone (mineral industries only)	Granite (including operations classified in manufactures)	Slate (including operations classified in manufactures)	Sandstone		Trap rock and Stone, n.e.c. (including operations classified in manufactures)
		Including operations classified in manufactures	Mineral industries only				Including operations classified in manufactures	Mineral industries only	
1	Number of operating companies	72	41	6	5	15	27	20	19
2	Number of establishments	72	41	6	5	15	27	20	19
	Number of mines, quarries, and producing oil and gas wells:								
3	1954	72	41	6	5	15	27	20	19
4	1939	46	(NA)	4	10	24	6	(NA)	2
5	Number of preparation plants	33	2	2	3	15	7	...	6
	Value of shipments:[6]								
6	1954.....$1,000	5,067	1,148	383	316	3,280	869	585	219
7	1939.....do	[7]2,263	(NA)	15	122	2,075	51	(NA)	([7])
8	Value added in mining.....do	4,186	908	298	282	2,737	678	453	191
9	Number of persons engaged, total	1,024	250	62	67	641	186	129	68
10	Production and development workers	886	194	53	61	582	148	102	42
11	All other employees	72	9	2	5	54	10	6	1
12	Proprietors and firm members	66	47	7	1	5	28	21	25
13	Performing manual labor	29	18	1	1	3	13	7	11
	Man-hours worked by production and development workers:								
14	1954.....1,000	1,804	388	110	123	1,208	289	204	74
15	1939.....do	[7]1,093	(NA)	15	131	874	73	(NA)	([7])
	At mines:								
16	Underground.....do	2	2	2	...	...	...	...	...
17	Open-pit.....do	897	330	93	52	466	218	163	68
18	Surface (mine shops, yards, etc.).....do	62	56	15	6	...	41	41	...
19	At preparation plants.....do	843	...	...	65	742	30	...	6
20	At oil and gas field operations	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
21	Man-hours spent on development and exploration work (included above).....do	8	...	...	...	8	...	...	...
22	Principal expenses designated below, total.....$1,000	3,881	770	203	252	2,630	671	446	125
23	Wages of production and development workers.....do	2,691	514	129	201	1,828	441	290	92
24	Salaries of all other employees.....do	304	30	8	17	242	35	20	2
25	Minerals received for preparation.....do	11	...	...	...	9	2	...	...
26	Supplies.....do	574	117	35	24	394	109	69	12
	Purchased fuel:								
27	Coal.....do	35	1	...	1	33	...	...	1
28	Fuel oil.....do	31	23	17	...	6	6	4	2
29	Gas.....do	14	5	...	...	9	...	...	5
30	Other fuels.....do	61	34	8	1	11	37	24	4
31	Purchased electric energy.....do	112	10	6	8	93	5	4	...
32	Contract work.....do	48	36	...	...	5	36	35	7
33	Purchased machinery installed.....do	174	126	24	2	33	98	87	17
34	Capital expenditures, total.....do	179	112	5	2	50	102	91	20
35	Development and exploration of mineral property.....do	20	2	...	...	17	1	1	2
36	Preparation plant construction.....do	...	...	...	...	...	...	...	...
37	Other construction.....do	2	2	...	...	...	...	...	2
38	New machinery and equipment.....do	103	73	...	2	15	79	68	7
39	Used plant and equipment.....do	54	35	5	...	18	22	22	9
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	24	9	2	1	11	8	6	2
41	Per production worker	27	46	38	17	19	51	56	59
42	Prime movers.....1,000	18	9	2	1	5	8	6	2
43	Electric motors driven by purchased energy.....do	6	([14])	([14])	([14])	6	([14])	([14])	([14])
44	Horsepower rating of electric motors driven by energy generated at establishment.....do	...	...	...	...	...	...	...	...
45	Energy used.....million kwh equivalent	72	25	11	1	45	11	8	4
	Produced and used for fuel at same establishment:								
46	Coal.....1,000 short tons	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
47	Crude petroleum.....1,000 barrels	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
48	Natural gas.....million cu.ft	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
	Purchased fuel:								
49	Coal.....1,000 short tons	4	([14])	...	...	4	...	...	([14])
50	Fuel oil.....1,000 barrels	6	6	3	...	...	1	1	2
51	Gas.....million cu.ft	23	([14])	...	...	23	...	...	([14])
52	Electric energy purchased.....million kwh	10	6	6	...	4	...	...	...
53	Electric energy generated and used.....do	...	...	...	...	...	...	...	...
54	Water intake, including mine water used.....million gallons	10	...	...	...	...	...	...	10
55	Per production worker.....do	0.01	...	...	...	...	...	...	0.24

xxx Not applicable. NA Not available. [1]Includes number of culm banks and dredges. [2]Represents establishments engaged in operating oil wells only and establishments engaged in operating both oil and gas wells. [3]Represents establishments engaged in operating gas wells only. [4]Included with figures for the Crude petroleum and Natural gas industries. [5]Includes data for 6 crushed and broken granite quarries. [6]See table 1, footnote 6. [7]Data for 2 dimension trap rock quarries, 1 talc and soapstone mine, and 1 tripoli mill are included with those for metal mining. [8]Represents net value of production, excluding the value of coal sold or transferred for preparation.

size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued													
Crushed and broken stone					Sand and gravel		Clay, ceramic, and refractory minerals				Peat	Other industries	
Limestone		Trap rock	Sandstone	Slate and Stone, n.e.c.	Common sand and gravel	Glass sand and Foundry sand	Fire clay		Kaolin and ball clay, and Clay, ceramic, and refractory minerals, n.e.c.				
Including operations classified in manufactures	Mineral industries only						Including operations in manufactures	Mineral industries only	Including operations in manufactures	Mineral industries only			
125	97	11	23	9	71	9	57	37	55	14	5	5	1
152	114	14	25	9	89	9	80	58	66	14	5	5	2
149	111	14	25	9	89	9	80	58	66	14	5	3	3
184	136	10	35	[5]15	53	17	76	(NA)	65	(NA)	...	1	4
113	113	14	22	9	87	6	15	15	...	8	5	3	5
57,368	37,357	6,409	3,264	1,225	20,508	2,797	8,676	5,436	2,789	1,049	142	171	6
14,555	10,030	803	1,544	[5]1,225	5,012	1,607	2,114	(NA)	745	(NA)	...	([7])	7
42,114	27,077	4,196	2,321	855	16,725	2,128	7,362	4,664	1,925	603	117	149	8
4,990	3,633	576	387	114	1,411	273	935	635	283	80	24	27	9
4,479	3,122	496	328	100	1,102	247	854	554	256	53	22	17	10
436	436	57	39	7	230	24	52	52	11	11	...	1	11
75	75	23	20	7	79	2	29	29	16	16	2	9	12
41	41	7	15	1	45	...	10	10	6	6	2	4	13
9,220	6,506	1,286	593	269	2,600	538	1,496	896	521	115	45	31	14
8,681	(NA)	353	1,091	[5]732	1,745	660	1,663	(NA)	576	(NA)	...	([7])	15
1,236	779	29	18	...	...	...	469	469	7	7	...	...	16
4,743	2,486	673	349	98	[11]1,196	190	810	210	450	44	32	3	17
963	963	141	28	...	(NA)	(NA)	90	90	7	7	...	24	18
2,278	2,278	443	198	171	1,404	348	127	127	57	57	13	4	19
...	...	...	...	...	...	...	...	...	...	...	...	...	20
42	42	...	12	2	1	...	50	50	3	3	...	...	21
33,330	23,243	4,261	2,073	792	10,251	1,794	4,344	2,720	1,889	696	78	90	22
16,027	10,914	1,982	940	361	4,676	951	2,811	1,729	970	195	64	58	23
2,445	2,445	314	169	50	1,355	123	243	243	39	39	...	10	24
60	60	...	...	...	...	...	1	1	127	127	...	...	25
	6,576	1,507	529	242	2,447	405		398		77	1	13	26
	38	5	1	1	191	81		5		1	...	...	27
	450	115	51	16	259	34		16		37	1	1	28
14,798	22	...	...	...	6	([14])	1,289	1	753	...	1	...	29
	543	86	119	11	303	30		52		5	10	7	30
	1,268	216	62	67	375	139		83		23	1	1	31
	927	36	202	44	639	31		192		192	...	...	32
	3,674	878	128	38	1,496	142		174		8	18	2	33
	3,278	630	149	49	1,933	193		150		24	7	2	34
	226	...	2	...	227	1		4		2	...	...	35
	634	98	22	20	336	60		4		...	...	...	36
	206	...	24	...	236	...		33		...	...	...	37
	1,939	479	99	29	997	132		102		7	7	2	38
	273	53	2	...	137	...		7		15	...	...	39
(NA)							(NA)		(NA)				
	265	37	19	9	79	8		20		6	2	1	40
	85	74	57	90	72	34		36		124	105	59	41
	168	22	13	2	58	4		15		5	2	1	42
	97	15	6	7	21	4		5		1	([14])	([14])	43
	3	...	([14])	...	1	...		...		...	...	...	44
	414	86	51	17	533	100		31		18	5	2	45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	48
	4	1	([12])	([14])	44	9		1		([14])	...	...	49
	96	28	11	5	56	7		4		9	1	([14])	50
	22	...	...	...	14	1		2		...	2	...	51
(NA)	77	10	2	5	20	11	(NA)	3	(NA)	1	([14])	([14])	52
	1	...	...	...	4	...		...		...	...	...	53
	19,904	140	146	29	7,503	2,100		6		1	...	...	54
	6.38	0.28	0.45	0.29	6.81	8.50		0.01		0.02	...	...	55

[9]Includes data for Metal mining contract services and Nonmetallic minerals (except fuels) contract services establishments, if any. [10]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown for these industries. [11]Includes man-hours worked on floating equipment. [12]See table 1, footnote 11. [13]See table 1, footnote 13.
[14]Less than one-half of the unit of measure specified. [15]For Bituminous coal, combined figures reported for msn-hours st surface and preparation plant sre included with man-hours at preparation plants, since 58 percent of the coal shipped was mechanically clesned.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Pennsylvania, all mineral operations:									
Including operations in manufactures	4,681	1,078,975	654,038	96,449	11,318	157,581	351,200	60,754	[2]51,605
Mineral industries only:									
Including crude petroleum and natural gas extraction	4,538	1,050,065	631,703	93,897	11,255	132,445	342,053	60,480	51,557
Excluding crude petroleum and natural gas extraction	3,433	960,803	566,853	86,930	10,439	118,575	317,913	56,935	34,485
Metal mining	7	18,234	9,904	1,374	213	2,602	5,911	1,238	1,786
Anthracite mining	1,436	408,431	196,835	33,026	4,436	48,266	113,932	21,997	8,446
Bituminous coal mining	1,607	454,632	300,452	46,295	4,924	74,440	175,686	28,922	18,248
Crude petroleum and natural gas extraction, total	1,105	89,262	[3]64,769	6,967	816	13,870	24,140	3,545	17,072
Crude petroleum and Natural gas[4]	910	67,150	47,174	4,611	751	8,846	14,681	3,294	15,268
Natural gas liquids	10	405	([3])	37	...	61	106	...	39
Oil and gas field contract services[5]	185	21,707	17,423	2,319	65	4,963	9,353	251	1,765
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	526	108,416	82,078	8,787	929	18,403	31,531	5,052	[2]6,053
Mineral industries only	383	79,506	59,743	6,235	866	13,267	22,384	4,778	6,005
Dimension stone:									
Including operations in manufactures	72	5,067	4,186	886	72	1,804	2,691	304	125
Mineral industries only	41	1,148	908	194	9	388	514	30	77
Crushed and broken stone:									
Including operations in manufactures	200	68,266	49,486	5,403	539	11,368	19,310	2,978	(NA)
Mineral industries only	162	48,255	34,449	4,046	539	8,654	14,197	2,978	3,778
Sand and gravel	98	23,305	18,853	1,349	254	3,138	5,627	1,478	1,989
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	146	11,465	9,287	1,110	63	2,017	3,781	282	(NA)
Mineral industries only	72	6,485	5,267	607	63	1,011	1,924	282	152
Other nonmetallic minerals (except fuels) mining	10	313	266	39	1	76	122	10	9
COUNTY									
Adams (mineral industries only)	6	3,996	2,593	203	31	499	823	179	102
Allegheny, total:									
Including operations in manufactures	156	(NA)	(NA)	[6]4,961	([6])	(NA)	(NA)	(NA)	(NA)
Mineral industries only:									
Including crude petroleum and natural gas extraction	151	(NA)	(NA)	[6]4,950	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas extraction	107	59,242	31,794	4,006	793	6,664	16,830	5,470	1,498
Bituminous coal	96	58,169	31,246	3,950	[7]750	6,548	16,637	[7]5,241	1,482
Crude petroleum, Natural gas, and Natural gas liquids[8]	44	(NA)	(NA)	[6]151	([6])	(NA)	(NA)	(NA)	(NA)
Metal mining and Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	16	1,186	643	67	43	139	225	229	[2]16
Mineral industries only	11	1,073	548	56	[7]43	116	193	[7]229	16
Sand and gravel	4	280	252	24	[7]32	57	94	[7]149	16
Armstrong, total:									
Including operations in manufactures	154	(NA)	(NA)	[6]1,835	([6])	(NA)	(NA)	(NA)	(NA)
Mineral industries only:									
Including crude petroleum and natural gas	147	(NA)	(NA)	[6]1,788	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	103	15,944	10,052	1,423	152	2,316	5,165	857	415

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY--Continued									
Armstrong--Continued									
Bituminous coal mining	90	9,886	5,461	882	[7]91	1,380	3,252	[7]430	143
Crude petroleum and natural gas[8]	44	(NA)	(NA)	[6]213	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	20	6,628	5,107	588	61	1,029	2,103	427	(NA)
Mineral industries only	13	6,058	4,591	541	61	936	1,913	427	272
Sand and gravel	5	2,754	1,855	154	33	358	769	282	175
Beaver:									
Including operations in manufactures	38	(NA)	(NA)	[6]515	([6])	(NA)	(NA)	(NA)	(NA)
Mineral industries only:									
Including crude petroleum and natural gas	31	(NA)	(NA)	[6]407	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	25	5,528	3,963	319	83	740	1,384	322	209
Bituminous coal	16	2,564	1,510	168	[7]51	347	614	[7]147	129
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	16	3,523	2,851	259	32	609	1,119	175	(NA)
Mineral industries only	9	2,964	2,453	151	32	393	770	175	80
Sand and gravel	5	2,575	2,146	135	32	356	708	175	76
Bedford, total	29	2,070	1,555	268	15	519	730	86	27
Bituminous coal	25	402	333	142	12	175	266	71	2
Nonmetallic minerals (except fuels) mining	4	1,668	1,222	126	3	344	464	15	25
Berks (mineral industries only)	11	3,527	2,815	315	86	759	1,604	494	1,567
Crushed and broken stone	6	1,502	1,124	141	30	333	516	184	65
Blair (mineral industries only), total	18	2,980	2,274	307	13	563	944	41	71
Bituminous coal	6	721	592	121	7	155	354	21	31
Nonmetallic minerals (except fuels) mining	12	2,259	1,682	186	6	408	590	20	40
Crushed and broken stone	8	2,165	1,609	165	3	381	555	11	29
Bucks:									
Including operations in manufactures	24	10,093	9,028	396	74	968	1,773	338	999
Mineral industries only	20	9,954	8,902	383	71	942	1,730	333	995
Sand and gravel	8	8,266	7,820	251	57	622	1,235	277	730
Butler:									
Including operations in manufactures	153	(NA)	(NA)	[6]2,073	([6])	(NA)	(NA)	(NA)	(NA)
Mineral industries only:									
Including crude petroleum and natural gas	150	(NA)	(NA)	[6]1,932	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	80	9,267	6,083	1,041	90	1,734	3,342	421	485
Bituminous coal	74	6,736	4,422	586	65	1,159	2,114	284	407
Crude petroleum and natural gas[8]	70	(NA)	(NA)	[6]150	([6])	(NA)	(NA)	(NA)	(NA)
Cambria (mineral industries only)	179	57,285	43,027	8,439	[7]633	12,433	30,501	[7]4,036	2,218
Bituminous coal	173	57,136	42,940	8,410	[7]768	12,405	30,448	[7]3,964	2,206
Cameron	9	(NA)	(NA)	[6]76	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	4	(NA)	(NA)	[6]53	([6])	(NA)	(NA)	(NA)	(NA)
Carbon, total	26	14,132	8,968	1,117	114	1,827	4,440	507	214
Anthracite mining	22	13,654	8,739	1,078	101	1,749	4,314	458	192
Sand and gravel	4	478	229	39	13	78	126	49	22
Centre, total:									
Including operations in manufactures	66	8,716	6,187	823	44	1,583	2,658	199	[2]413
Mineral industries only	63	5,046	3,145	541	44	1,019	1,691	199	413

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Centre—Continued									
Bituminous coal mining	53	3,805	2,297	353	26	646	1,095	115	322
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	13	4,911	3,890	470	18	937	1,563	84	[2]91
Mineral industries only	10	1,241	848	188	18	373	596	84	91
Crushed and broken stone:									
Including operations in manufactures	9	4,717	3,726	433	17	870	1,445	79	(NA)
Mineral industries only	6	1,047	684	151	17	306	478	79	91
Chester:									
Including operations in manufactures	15	2,471	1,904	236	23	585	962	131	[2]89
Mineral industries only	9	1,389	1,006	125	19	360	522	114	89
Crushed and broken stone	5	1,340	967	119	19	344	505	114	89
Clarion, total:									
Including operations in manufactures	111	(NA)	(NA)	[6]980	([6])	(NA)	(NA)	(NA)	(NA)
Mineral industries only:									
Including crude petroleum and natural gas	107	(NA)	(NA)	[6]954	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	63	8,528	5,674	725	56	1,510	2,449	252	270
Bituminous coal	54	7,775	5,026	648	48	1,353	2,197	208	203
Crude petroleum and natural gas[8]	44	(NA)	(NA)	[6]173	([6])	(NA)	(NA)	(NA)	(NA)
Other mineral operations:									
Including operations in manufactures	13	948	796	103	8	208	331	44	[2]67
Mineral industries only	9	753	648	77	8	157	252	44	...
Clearfield (mineral industries only), total:									
Including crude petroleum and natural gas	238	(NA)	(NA)	[6]2,896	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	234	25,554	15,584	2,641	239	4,396	8,494	849	1,464
Bituminous coal mining	205	23,238	13,704	2,378	[7]218	3,991	7,628	[7]751	1,436
Nonmetallic minerals (except fuels) mining (mineral industries only)	29	2,316	1,880	263	21	405	866	98	28
Clay, ceramic, and refractory minerals (mineral industries only)	26	2,292	1,864	253	20	389	847	97	20
Clinton, total	27	(NA)	(NA)	[6]256	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	18	2,363	1,275	169	7	313	561	27	168
Crude petroleum and natural gas[8]	6	(NA)	(NA)	[6]31	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	3	518	396	45	4	96	165	23	64
Columbia (anthracite only)	18	8,325	3,892	564	37	964	2,008	191	145
Crawford, total	18	(NA)	(NA)	[6]37	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	13	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	5	217	145	12	...	21	30	...	23
Cumberland	8	1,073	435	76	10	201	256	30	100
Crushed and broken stone	4	825	341	67	(D)	180	226	(D)	78
Dauphin (mineral industries only), total	35	2,279	1,377	177	32	326	586	157	92
Anthracite mining	31	1,223	595	88	8	149	237	19	80
Nonmetallic minerals (except fuels) mining	4	1,056	782	89	24	177	349	138	12
Delaware (mineral industries only)	7	2,318	1,885	203	19	526	852	76	170
Elk	67	(NA)	(NA)	[6]820	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	24	2,094	1,245	219	7	341	762	27	51
Crude petroleum, Natural gas, and Natural gas liquids[8]	40	(NA)	(NA)	[6]586	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Erie	8	(NA)	(NA)	[6]37	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	5	241	215	[6]24	([6])	38	[6]98	([6])	15
Fayette (mineral industries only), total.	92	(NA)	(NA)	[6]6,220	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	71	69,229	36,605	5,466	[7]533	9,081	21,952	[7]3,127	1,374
Crude petroleum and natural gas[8]	12	(NA)	(NA)	[6]77	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	9	2,100	1,471	124	20	266	433	90	167
Forest	30	(NA)	(NA)	[6]104	([6])	(NA)	(NA)	(NA)	(NA)
Franklin	11	1,048	824	66	[7]43	145	198	[7]202	223
Greene (mineral industries only), total..	71	(NA)	(NA)	[6]7,375	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	21	54,466	39,914	6,636	474	10,998	26,817	2,996	2,348
Crude petroleum and natural gas[8]	47	(NA)	(NA)	[6]165	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal contract services and Natural gas liquids	3	1,041	814	[6]100	([6])	167	[6]539	([6])	13
Huntingdon (mineral industries only), total	19	6,046	3,567	465	44	780	1,593	234	260
Bituminous coal	11	2,079	533	97	9	113	269	41	22
Other mineral industries	8	3,967	3,034	368	35	667	1,324	193	238
Crushed and broken stone	4	1,144	876	109	9	176	303	46	35
Indiana	126	(NA)	(NA)	[1]2,950	[1]150	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	116	30,164	18,517	2,836	174	4,814	11,671	932	2,481
Jefferson (mineral industries only), total	106	(NA)	(NA)	[6]1,166	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	83	8,897	4,772	909	72	1,403	2,707	291	578
Crude petroleum and natural gas[8]	18	(NA)	(NA)	[6]150	([6])	(NA)	(NA)	(NA)	(NA)
Other mineral industries	5	192	178	32	3	67	92	11	47
Juaniata (mineral industries only)	3	192	133	22	...	48	72	...	1
Lackawanna (mineral industries only)	174	55,285	25,921	4,724	925	6,240	15,003	4,424	654
Lancaster:									
Including operations in manufactures	26	4,298	3,377	323	65	756	1,110	303	[2]668
Mineral industries only	21	3,934	3,083	273	58	647	972	256	668
Crushed and broken stone	17	2,792	2,165	193	67	452	629	287	459
Lawrence, total:									
Including operations in manufactures	35	8,808	5,793	580	50	1,164	2,290	310	[2]641
Mineral industries only	29	7,248	4,183	426	50	856	1,725	310	641
Bituminous coal mining	21	3,594	2,077	128	10	296	619	68	281
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	14	5,214	3,716	452	40	868	1,671	242	[2]360
Mineral industries only	8	3,654	2,672	298	40	560	1,106	242	360
Crushed and broken stone	4	3,371	2,418	276	38	518	1,019	234	334
Lebanon (mineral industries only)	10	14,282	10,035	1,157	167	2,150	4,285	997	268
Lehigh:									
Including operations in manufactures	11	6,085	4,767	442	21	917	1,999	122	[2]176
Mineral industries only	5	2,822	2,185	251	21	537	1,233	122	176
Luzerne (mineral industries only), total.	172	152,223	79,403	13,743	2,171	21,576	50,901	10,573	4,032
Anthracite mining	164	151,094	78,728	13,639	2,161	21,324	50,500	10,520	3,643
Nonmetallic minerals (except fuels) mining (mineral industries only)	8	1,129	675	104	10	252	401	53	389
Sand and gravel	4	386	248	30	6	71	119	34	72
Lycoming (mineral industries only)	15	[9]1,627	[9]1,088	95	29	[9]230	[9]335	[9]164	[9]326
McKean (mineral industries only), total..	288	(NA)	(NA)	[6]2,461	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	3	412	321	[6]26	([6])	58	[6]113	([6])	66
Crude petroleum and natural gas[8]	282	(NA)	(NA)	[6]2,413	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	3	107	94	17	5	35	51	15	4

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Mercer	23	(NA)	(NA)	[6]277	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	11	2,699	1,932	196	28	420	[6]820	([6])	84
Bituminous coal contract services and Nonmetallic minerals (except fuels) mining	8	393	327	36	3	76	132	9	17
Montgomery, total: Including operations in manufactures	22	4,279	3,065	346	55	752	1,352	456	[2]366
Mineral industries only	17	3,857	2,695	318	[7]53	699	1,256	[7]446	350
Dimension stone (mineral industries only)	5	120	95	21	4	43	59	14	28
Crushed and broken stone	12	3,737	2,600	297	37	656	1,197	266	322
Northampton, total: Including operations in manufactures	29	13,887	11,910	991	106	2,061	3,700	606	[2]50
Mineral industries only	6	1,483	1,190	90	[7]63	204	389	[7]422	26
Dimension slate (classified in manufactures)	11	2,854	2,377	492	43	1,038	1,598	184	24
Crushed and broken limestone and Clay (classified in manufactures)	12	9,550	8,343	409	(NA)	819	1,713	(NA)	(NA)
Northumberland (mineral industries only), total	515	49,488	19,639	3,368	265	4,515	10,480	1,862	631
Anthracite mining	511	49,202	19,380	3,343	261	4,462	10,403	1,850	599
Nonmetallic minerals (except fuels) mining (mineral industries only)	4	286	259	25	4	53	77	12	32
Philadelphia	4	2,016	707	67	[7]199	178	240	[7]1,405	43
Potter (mineral industries only), total	19	(NA)	(NA)	[6]122	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[8]	14	(NA)	(NA)	[6]92	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (mineral industries only)	5	112	96	[6]30	([6])	55	[6]77	([6])	25
Schuylkill (mineral industries only)	508	[9]128,379	[9]58,478	9,474	934	[9]13,135	[9]31,040	[9]4,495	[9]3,106
Anthracite mining	503	128,107	58,303	9,444	933	13,074	30,969	4,493	2,980
Snyder (mineral industries only)	9	305	237	[6]46	([6])	90	[6]109	([6])	10
Somerset (mineral industries only), total	198	13,265	10,574	2,404	165	3,100	6,852	705	322
Bituminous coal	189	12,651	10,080	2,307	[7]160	2,924	6,519	[7]687	293
Bituminous coal contract services and Nonmetallic minerals (except fuels) mining	9	614	494	97	5	176	333	18	29
Sullivan	3	148	123	30	4	46	82	13	...
Susquehanna (mineral industries only)	5	603	264	31	12	92	111	73	19
Tioga	21	(NA)	(NA)	[6]90	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	13	389	285	51	5	87	157	6	6
Venango, total	31	(NA)	(NA)	[6]843	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	9	1,825	1,057	117	8	276	487	37	111
Crude petroleum and natural gas[8]	15	(NA)	(NA)	[6]633	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal contract services, Natural gas liquids, and Nonmetallic minerals (except fuels) mining	7	1,125	(NA)	80	5	197	358	26	218
Warren, total	91	(NA)	(NA)	[6]275	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and Natural gas[8]	87	(NA)	(NA)	[6]258	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	4	168	(NA)	[6]17	([6])	32	[6]57	([6])	30
Washington (including operations in manufactures), total	114	(NA)	(NA)	[6]8,655	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	73	74,225	58,205	7,376	1,009	11,766	29,330	6,745	2,136
Crude petroleum and natural gas[8]	37	(NA)	(NA)	[6]259	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (including operations in manufactures)	4	121	100	[6]11	([6])	19	[6]30	([6])	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Westmoreland (mineral industries only), total	145	(NA)	(NA)	[6]2,165	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	124	15,555	12,984	1,827	177	2,855	7,126	966	1,521
Crude petroleum and natural gas[8]	13	(NA)	(NA)	[6]100	([6])	(NA)	(NA)	(NA)	(NA)
Other mineral industries	8	579	536	52	9	135	197	29	130
York:									
Including operations in manufactures	17	[9]5,430	[9]4,398	279	56	[9]648	[9]1,039	[9]389	(NA)
Mineral industries only	10	[9]3,648	[9]2,716	231	56	[9]552	[9]876	[9]389	[9]228

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 6.
[2]See table 1, footnote 13.
[3]See table 2, footnote 10.
[4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.
[6]Figures for "All other employees" are included with those for "Production and development workers."
[7]Includes data for central office employees.
[8]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.
[9]Excludes data for one Crude petroleum or Natural gas establishment.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	County	All mineral operations			Metal mining				
		Total	Classified in mineral industries	Included in manufactures	Iron ores	Zinc ores	Manganese ores	Metal mining contract services	Titanium ores
1	Pennsylvania, total	4,681	4,538	143	2	1	1	2	1
2	Adams	9	6	3	...	...	...	...	...
3	Allegheny	156	151	5	...	...	...	...	1
4	Armstrong	154	147	7	...	...	...	...	...
5	Beaver	38	31	7	...	...	...	...	...
6	Bedford	30	29	1	...	...	...	...	...
7	Berks	14	11	3	1	...	...	1	...
8	Blair	19	18	1	...	...	...	...	...
9	Bradford	2	2	...	...	...	...	...	...
10	Bucks	24	20	4	...	...	...	...	...
11	Butler	153	150	3	...	...	...	...	...
12	Cambria	181	179	2	...	...	...	...	...
13	Cameron	9	9	...	...	...	...	...	...
14	Carbon	26	26	...	...	...	...	...	...
15	Centre	66	63	3	...	...	...	...	...
16	Chester	15	9	6	...	...	...	...	...
17	Clarion	111	107	4	...	...	...	...	...
18	Clearfield	241	238	3	...	...	...	...	...
19	Clinton	27	27	...	...	...	...	...	...
20	Columbia	20	19	1	...	...	...	...	...
21	Crawford	18	18	...	...	...	...	...	...
22	Cumberland	9	8	1	...	...	...	...	...
23	Dauphin	37	35	2	...	...	...	...	...
24	Delaware	8	7	1	...	...	...	...	...
25	Elk	67	67	...	...	...	...	...	...
26	Erie	8	8	...	...	...	...	...	...
27	Fayette	93	92	1	...	...	...	...	...
28	Forest	30	30	...	...	...	...	...	...
29	Franklin	11	11	...	...	...	...	...	...
30	Fulton	5	3	2	...	...	...	...	...
31	Greene	72	71	1	...	...	...	...	...
32	Huntingdon	20	19	1	...	...	...	...	...
33	Indiana	126	126	...	...	...	...	...	...
34	Jefferson	108	106	2	...	...	...	...	...
35	Juniata	4	3	1	...	...	...	...	...
36	Lackawanna	175	174	1	...	...	...	...	...
37	Lancaster	26	21	5	...	...	...	...	...
38	Lawrence	35	29	6	...	...	...	...	...
39	Lebanon	12	10	2	1	...	...	...	...
40	Lehigh	11	5	6	...	1	...	1	...
41	Luzerne	174	172	2	...	...	...	...	...
42	Lycoming	15	14	1	...	...	...	...	...
43	McKean	290	288	2	...	...	...	...	...
44	Mercer	23	23	...	...	...	...	...	...
45	Mifflin	4	3	1	...	...	...	...	...
46	Monroe	4	4	...	...	...	...	...	...
47	Montgomery	22	17	5	...	...	...	...	...
48	Montour	3	3	...	...	...	...	...	...
49	Northampton	29	6	23	...	...	...	...	...
50	Northumberland	516	515	1	...	...	...	...	...
51	Philadelphia	4	4	...	...	...	1	...	...
52	Potter	20	19	1	...	...	...	...	...
53	Schuylkill	509	508	1	...	...	...	...	...
54	Snyder	8	6	2	...	...	...	...	...
55	Somerset	200	198	2	...	...	...	...	...
56	Sullivan	3	3	...	...	...	...	...	...
57	Susquehanna	7	5	2	...	...	...	...	...
58	Tioga	21	21	...	...	...	...	...	...
59	Union	3	2	1	...	...	...	...	...
60	Venango	31	31	...	...	...	...	...	...
61	Warren	91	91	...	...	...	...	...	...
62	Washington	114	111	3	...	...	...	...	...
63	Wayne	5	5	...	...	...	...	...	...
64	Westmoreland	149	145	4	...	...	...	...	...
65	Wyoming	2	2	...	...	...	...	...	...
66	York	17	10	7	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Anthracite mining			Bituminous coal mining		Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining (Dimension stone)				
Anthracite	Anthracite stripping contract services	Anthracite contract services, except stripping	Bituminous coal	Bituminous coal contract services	Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]	Limestone (classified in mineral industries)	Granite		Slate (classified in manufactures)	
									Classified in mineral industries	Included in manufactures		
1,291	132	13	1,545	62	910	10	185	6	2	3	15	1
...	...	...	...	...	...	...		...	...	...	...	2
...	...	...	96	...	41	3		...	...	...	...	3
...	...	...	86	4	44	...		...	...	...	...	4
...	...	...	16	...	6	...		...	...	...	...	5
...	...	...	25	...	...	...		...	...	...	...	6
1	...	...	...	...	...	...		...	...	...	...	7
...	...	...	6	...	...	...		...	...	...	...	8
...	...	...	1	...	...	...		...	...	...	...	9
...	...	...	...	...	...	...		1	...	1	...	10
...	...	...	74	2	70	...		...	...	...	...	11
...	...	...	173	2	...	...		...	...	...	...	12
...	...	...	2	1	4	...		1	...	...	...	13
15	6	1	...	...	...	...		...	...	...	...	14
...	...	...	49	4	...	...		1	...	...	...	15
...	...	...	...	...	...	...		1	...	1	...	16
...	...	...	54	1	44	...		...	...	...	...	17
...	...	...	180	25	4	...		...	...	...	...	18
...	...	...	18	...	6	...		...	...	...	...	19
18	...	...	...	...	...	...		...	...	...	...	20
...	...	...	...	...	13	...		...	...	...	...	21
...	...	...	...	...	...	...		...	...	...	...	22
31	...	...	...	...	...	...		...	...	...	...	23
...	...	...	...	...	...	...		...	1	1	...	24
...	...	...	24	1	39	1		...	...	...	...	25
...	...	...	...	...	3	...		...	...	...	...	26
...	...	...	68	3	12	...		...	...	...	...	27
...	...	...	...	...	28	...		...	...	...	...	28
...	...	...	...	...	...	...		...	...	...	...	29
...	...	...	1	...	...	...		...	...	...	...	30
...	...	...	21	1	47	2		...	...	...	...	31
...	...	...	11	1	...	...	(NA)	...	...	...	...	32
...	...	...	113	3	8	...		...	...	...	...	33
...	...	...	83	2	18	...		...	...	...	...	34
...	...	...	...	...	...	...		...	...	...	...	35
151	22	1	...	...	...	...		...	...	...	...	36
1	...	...	...	...	...	...		...	...	...	1	37
...	...	...	18	3	...	...		...	...	...	...	38
2	...	...	...	...	...	...		...	...	...	...	39
...	...	...	...	...	...	...		...	...	...	...	40
131	29	4	...	...	...	...		...	...	...	...	41
...	...	...	7	...	1	...		...	...	...	1	42
...	...	...	3	...	282	...		...	...	...	...	43
...	...	...	11	1	4	...		...	...	...	...	44
...	...	...	...	...	...	...		...	...	...	...	45
...	...	...	...	...	...	...		...	...	...	...	46
...	...	...	...	...	...	...		...	1	...	...	47
...	...	...	...	...	...	...		...	...	...	...	48
1	...	...	...	...	...	...		...	...	...	11	49
496	14	1	...	...	...	...		...	...	...	1	50
...	...	...	...	...	...	...		1	...	...	...	51
...	...	...	...	...	14	...		...	...	...	...	52
436	61	6	...	...	1	...		...	...	...	...	53
4	...	...	...	...	...	...		...	...	...	...	54
...	...	...	189	2	...	...		1	...	...	...	55
3	...	...	...	...	...	...		...	...	...	...	56
...	...	...	...	...	...	...		...	...	...	1	57
...	...	...	13	1	6	...		...	...	...	...	58
...	...	...	...	...	...	...		...	...	...	...	59
...	...	...	9	1	15	3		...	...	...	...	60
...	...	...	...	...	87	1		...	...	...	...	61
...	...	...	70	3	37	...		...	...	...	...	62
1	...	...	...	...	...	...		...	...	...	...	63
...	...	...	124	1	13	...		...	...	...	...	64
...	...	...	...	...	...	...		...	...	...	...	65
...	...	...	...	...	1	...		...	...	...	...	66

Table 4.—NUMBER OF MINERAL OPERATIONS,

	County	Nonmetallic minerals (except fuels) mining—Continued									
		Dimension stone—Continued				Crushed and broken stone					
		Sandstone		Stone, n.e.c.		Limestone		Slate	Trap rock	Sandstone	Stone, n.e.c.
		Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures				
1	Pennsylvania, total	20	7	13	6	114	38	2	14	25	7
2	Adams	...	...	...	...	3	...	...	1	...	1
3	Allegheny	4	...	...	...	...	...	...	...	1	...
4	Armstrong	...	...	...	...	4	1	...	...	...	...
5	Beaver	...	...	...	...	...	...	...	...	...	...
6	Bedford	...	...	...	...	1	1	...	...	1	...
7	Berks	...	...	...	...	4	...	...	2	...	...
8	Blair	...	...	...	...	5	...	...	...	3	...
9	Bradford	...	...	...	...	...	...	...	...	...	...
10	Bucks	1	1	...	1	3	...	...	3	1	3
11	Butler	...	1	...	...	2	1	...	...	...	...
12	Cambria	...	...	...	...	...	...	...	...	1	...
13	Cameron	...	...	...	...	...	...	...	...	...	...
14	Carbon	...	...	...	...	...	...	...	...	...	...
15	Centre	...	...	...	...	5	3	...	...	1	...
16	Chester	2	1	...	...	3	1	...	2	...	...
17	Clarion	...	...	...	...	1	...	...	...	...	...
18	Clearfield	...	...	...	...	...	...	...	...	1	...
19	Clinton	...	...	...	...	1	...	...	...	...	...
20	Columbia	...	...	...	...	...	...	...	...	...	...
21	Crawford	...	...	...	...	...	...	...	...	...	...
22	Cumberland	...	...	...	...	4	1	...	...	...	...
23	Dauphin	...	...	...	...	3	...	...	...	...	...
24	Delaware	3	...	1	...	...	...	...	2	...	...
25	Elk	...	...	...	...	...	...	...	...	...	...
26	Erie	...	...	...	...	...	...	...	...	...	...
27	Fayette	...	...	...	...	2	...	...	...	2	...
28	Forest	...	...	...	...	...	...	...	...	...	...
29	Franklin	...	...	...	...	7	...	...	...	1	...
30	Fulton	...	...	...	...	2	2	...	...	...	...
31	Greene	...	...	...	...	...	...	...	...	...	...
32	Huntingdon	...	...	...	...	2	...	...	...	2	...
33	Indiana	...	...	...	...	1	...	...	...	...	...
34	Jefferson	...	...	...	...	1	...	...	...	...	...
35	Juniata	...	...	...	...	3	...	...	...	...	...
36	Lackawanna	...	1	...	...	...	...	...	...	...	...
37	Lancaster	...	...	...	...	15	2	...	...	1	1
38	Lawrence	...	...	...	...	3	2	...	...	1	...
39	Lebanon	...	...	...	...	5	2	...	...	1	...
40	Lehigh	...	...	...	1	3	5	...	...	...	...
41	Luzerne	...	1	...	...	1	...	...	...	1	...
42	Lycoming	...	...	...	...	2	...	...	...	...	...
43	McKean	...	...	...	...	...	...	...	...	...	...
44	Mercer	...	...	...	...	...	...	...	...	2	1
45	Mifflin	...	...	...	...	1	1	...	...	...	...
46	Monroe	1	...	...	...	1	...	...	...	...	...
47	Montgomery	2	1	2	...	6	...	...	4	1	1
48	Montour	...	...	...	...	2	...	...	...	...	...
49	Northampton	...	...	...	...	2	11	1	...	...	...
50	Northumberland	...	...	...	...	1	...	...	...	1	...
51	Philadelphia	...	...	1	...	...	...	...	...	...	...
52	Potter	1	...	4	1	...	...	...	...	...	...
53	Schuylkill	...	...	...	...	2	...	...	...	...	...
54	Snyder	...	...	...	...	1	...	...	...	...	...
55	Somerset	...	...	...	...	1	1	...	...	...	...
56	Sullivan	...	...	...	...	...	...	...	...	...	...
57	Susquehanna	1	...	2	1	1	...	...	...	1	...
58	Tioga	...	...	...	...	...	...	...	...	...	...
59	Union	...	...	...	1	2	...	...	...	...	...
60	Venango	...	...	...	...	1	...	...	...	...	...
61	Warren	...	...	...	...	...	...	...	...	...	...
62	Washington	1	...	...	...	...	...	...	...	...	...
63	Wayne	2	...	...	...	...	...	...	...	1	...
64	Westmoreland	2	1	3	1	1	...	...	...	1	...
65	Wyoming	...	...	...	...	...	...	...	...	...	...
66	York	...	...	...	...	6	4	1	...	...	...

NA Not available.
[1]See table 3, footnote 4, and for counties, footnote 8.
[2]See table 3, footnote 5.

BY INDUSTRY AND COUNTY: 1954--Continued

Nonmetallic minerals (except fuels) mining—Continued														
Sand and gravel			Clay, ceramic, and refractory minerals						Natural abrasives, except sand, n.e.c.	Chemical and fertilizer mineral mining, n.e.c.	Nonmetallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels)		
			Fire clay		Kaolin and ball clay		Clay, ceramic, and refractory minerals, n.e.c.							
Common sand and gravel	Glass sand	Foundry sand	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures				Mica	Peat	
89	3	6	58	22	1	1	13	51	1	1	2	1	5	1
...	...	...	...	...	...	...	1	3	...	...	...	...	...	2
2	...	2	...	1	...	...	1	4	...	...	...	...	...	3
5	...	...	4	5	...	...	...	1	...	...	...	...	...	4
5	...	...	1	4	...	...	2	3	...	...	1	...	...	5
1	1	...	...	...	...	...	...	...	...	...	...	...	...	6
2	...	...	...	...	...	...	...	3	...	...	...	...	...	7
2	...	...	2	...	...	...	...	1	...	...	...	...	...	8
1	...	...	...	...	...	...	...	...	...	...	...	...	...	9
7	...	1	...	...	...	...	...	1	...	...	...	...	...	10
1	...	...	1	...	...	...	...	1	...	...	...	...	...	11
1	...	...	2	...	...	...	...	2	...	...	...	...	...	12
1	...	...	...	...	...	...	...	...	...	...	...	...	...	13
4	...	...	...	...	...	...	...	...	...	...	...	...	...	14
...	...	...	2	...	...	...	...	...	...	1	...	...	...	15
...	...	...	...	2	...	...	1	1	...	...	...	...	...	16
1	...	...	6	3	...	...	...	1	...	...	...	...	...	17
2	...	...	24	2	...	...	2	1	...	...	...	...	...	18
...	...	...	2	...	...	...	...	...	...	...	...	...	...	19
1	...	...	...	...	...	...	...	1	...	...	...	...	...	20
5	...	...	...	...	...	...	...	...	...	...	...	...	...	21
2	...	...	...	...	1	...	1	...	...	...	...	...	...	22
1	...	...	...	...	...	...	...	2	...	...	...	...	...	23
...	...	...	...	...	...	...	...	...	...	...	...	...	...	24
...	...	...	2	...	...	...	...	...	...	...	...	...	...	25
3	...	1	...	...	...	...	...	...	...	...	...	...	1	26
2	...	...	3	...	...	...	...	1	...	...	...	...	...	27
2	...	...	...	...	...	...	...	...	...	...	...	...	...	28
3	...	...	...	...	...	...	...	...	...	...	...	...	...	29
...	...	...	...	...	...	...	...	...	...	...	...	...	...	30
...	...	...	...	...	...	...	...	1	...	...	...	...	...	31
1	1	...	1	...	...	...	...	1	...	...	...	...	...	32
...	...	...	1	...	...	...	...	...	...	...	...	...	...	33
...	...	...	2	2	...	...	...	...	...	...	...	...	...	34
...	...	...	...	1	...	...	...	...	...	...	...	...	...	35
...	...	...	...	...	...	...	...	...	...	...	...	...	...	36
1	...	...	1	...	...	...	...	2	...	...	1	...	...	37
1	...	...	...	...	...	...	1	4	...	...	...	...	2	38
1	...	...	...	...	...	...	...	...	...	...	...	...	...	39
...	...	...	...	...	...	...	...	...	...	...	...	...	...	40
4	...	...	...	...	...	...	...	1	...	...	...	...	2	41
2	...	...	...	...	...	...	1	...	1	...	...	...	...	42
...	...	1	2	1	...	...	...	1	...	...	...	...	...	43
4	...	...	...	...	...	...	...	...	...	...	...	...	...	44
2	...	...	...	...	...	...	...	...	...	...	...	...	...	45
2	...	...	...	...	...	...	...	...	...	...	...	...	...	46
...	...	...	...	...	...	1	...	3	...	...	...	...	...	47
1	...	...	...	...	...	...	...	...	...	...	...	...	...	48
2	...	...	...	...	...	...	...	1	...	...	...	...	...	49
1	...	...	...	...	...	...	1	...	...	...	...	...	...	50
1	...	...	...	...	...	...	...	...	...	...	...	...	...	51
...	...	...	...	...	...	...	...	...	...	...	...	...	...	52
1	...	...	...	...	...	...	1	1	...	...	...	...	...	53
...	...	...	...	...	...	...	1	2	...	...	...	...	...	54
3	...	...	2	...	...	...	...	1	...	...	...	...	...	55
...	...	...	...	...	...	...	...	...	...	...	...	...	...	56
...	...	...	...	...	...	...	...	...	...	...	...	...	...	57
1	...	...	...	...	...	...	...	...	...	...	...	...	...	58
...	...	...	...	...	...	...	...	...	...	...	...	...	...	59
...	1	1	...	...	...	...	...	...	...	...	...	...	...	60
3	...	...	...	...	...	...	...	...	...	...	...	...	...	61
...	...	...	...	...	...	...	...	3	...	...	...	...	...	62
1	...	...	...	...	...	...	...	...	...	...	...	...	...	63
...	...	...	...	1	...	...	...	1	...	...	...	...	...	64
2	...	...	...	...	...	...	...	...	...	...	...	...	...	65
1	...	...	...	...	...	...	...	3	...	...	...	1	...	66

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Pennsylvania, all mineral operations:												
Including operations classified in manufactures	4,681	993	1,891	618	458	400	127	93	57	37	6	1
Mineral industries only	4,538	985	1,839	600	441	366	116	90	57	37	6	1
Metal mining, total	7	1	...	...	...	3	...	2	...	...	1	...
Iron ores	2	...	...	...	...	1	...	...	...	...	1	...
Zinc ores	1	1	...	...	...	...	...	...	...	...	...	...
Manganese ores	1	...	...	...	...	1	...	...	...	...	...	...
Metal mining contract services	2	...	...	...	...	...	...	2	...	...	...	...
Titanium ores	1	...	...	...	...	1	...	...	...	...	...	...
Anthracite mining, total	1,436	660	262	159	110	129	44	32	25	13	2	...
Anthracite	1,291	655	230	134	86	93	31	25	22	13	2	...
Anthracite stripping contract services	132	4	31	19	22	33	13	7	3	...	...	...
Anthracite contract services, except stripping	13	1	1	6	2	3	...	...	...	...	...	...
Bituminous coal mining, total	1,607	125	758	244	197	143	43	43	30	21	2	1
Bituminous coal	1,545	122	733	231	185	137	40	43	30	21	2	1
Bituminous coal mining contract services	62	3	25	13	12	6	3	...	...	...	...	...
Crude petroleum and natural gas extraction, total	1,105	180	702	133	43	27	11	5	...	3	1	...
Crude petroleum and natural gas	910	176	583	94	25	17	7	5	...	3	...	...
Natural gas liquids	10	...	6	4	...	...	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	132	2	78	27	14	7	4	...	...	...	...	...
Building, repairing, and dismantling rigs and derricks	4	...	1	3	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c.	49	2	34	5	4	3	...	...	...	...	1	...
Nonmetallic minerals (except fuels), mining, total:												
Including operations classified in manufactures	526	27	169	82	108	98	29	11	2	...	...	...
Mineral industries only	383	19	117	64	91	64	18	8	2	...	...	...
Dimension stone:												
Limestone	6	...	3	1	1	1	...	...	...	...	...	...
Granite:												
Classified in mineral industries	2	...	1	1	...	...	...	...	...	...	...	...
Included in manufactures	3	...	...	...	1	2	...	...	...	...	...	...
Slate (included in manufactures)	15	1	...	...	3	4	7	...	...	...	...	...
Sandstone:												
Classified in mineral industries	20	2	10	5	1	2	...	...	...	...	...	...
Included in manufactures	7	1	3	1	1	1	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	13	3	8	2	...	...	...	...	...	...	...	...
Included in manufactures	6	...	6	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	114	2	17	12	40	25	12	4	2	...	...	...
Included in manufactures[1]	38	4	1	3	4	19	4	3	...	...	...	...
Slate	2	...	...	1	...	...	1	...	...	...	...	...
Trap rock	14	...	1	1	3	5	3	1	...	...	...	...
Sandstone	25	1	2	5	10	7	...	...	...	...	...	...
Stone, n.e.c.	7	...	3	3	1	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	89	3	39	12	20	11	2	2	...	...	...	...
Glass sand	3	...	1	...	...	1	...	1	...	...	...	...
Foundry sand	6	1	1	3	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	58	3	20	12	12	11	...	...	...	...	...	...
Included in manufactures	22	...	4	7	5	6	...	...	...	...	...	...
Kaolin and ball clay:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	1	1	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	13	3	5	3	1	1	...	...	...	...	...	...
Included in manufactures	51	1	38	7	3	2	...	...	...	...	...	...

See footnote at end of table.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENTS SIZE, BY INDUSTRY: 1954—Continued

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Nonmetallic minerals (except fuels), mining, total—Continued												
Natural abrasives, except sand, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	1	1	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	2	...	1	1	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Mica	1	...	...	1	...	...	...	...	...	...	...	...
Peat	5	...	3	1	1	...	...	...	...	...	...	...

[1]Includes 4 quarries operated as part of establishments classified in wholesale trade.

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Million gallons per production worker[3]	Gallons per dollar value added	Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons): Used	Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Pennsylvania, total	93,897	631,784	45,358	0.48	72	35,589	24,577	161,354	153,965	12	33	23	32
Metal mining	1,374	9,904	317	0.23	32	15	...	1,303	3,858	1	...	...	99
Anthracite mining, total	33,026	196,835	14,527	0.44	74	11,072	12,687	84,968	89,001	31	31	8	30
Anthracite	28,823	167,090	14,519	0.50	87	11,064	12,687	82,489	88,993	31	31	8	[4]30
Anthracite stripping contract services	4,074	29,079	8	([5])	([5])	8	...	2,479	8	100	...	...	...
Anthracite contract services, except stripping	129	666	...	...	...	...	...	...	...	...	...	...	...
Bituminous coal mining, total	46,295	300,452	3,709	0.08	12	2,525	649	61,852	19,393	19	55	3	23
Bituminous coal	45,633	294,970	3,684	0.08	12	2,503	624	60,420	19,343	19	55	3	[4]23
Bituminous coal mining contract services	662	5,482	25	0.04	5	22	25	1,432	50	...	...	...	[6]100
Crude petroleum and natural gas extraction, total	6,967	[7]64,850	8,217	1.18	127	3,757	xxx	xxx	[8]8,120	1	8	81	10
Crude petroleum and natural gas	4,611	47,174	7,504	1.63	159	3,288	xxx	xxx	(NA)	1	2	89	[6]8
Natural gas liquids	37	([7])	491	13.27	(NA)	469	xxx	xxx	1,394	...	85	15	...
Oil and gas field contract services: Drilling oil and gas wells	914	7,039	221	0.24	31	...	xxx	xxx	(NA)	...	5	..	[6]95
Building, repairing, and dismantling rigs and derricks and Oil and gas field contract services, n.e.c	1,405	10,384	1	([5])	([5])	...	xxx	xxx	(NA)	...	...	100	...
Nonmetallic minerals (except fuels) mining, total	6,235	59,743	18,588	2.98	311	18,220	11,241	13,231	33,593	([5])	41	17	42
Dimension stone	194	908	...	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone: Limestone	3,122	27,077	8,855	2.84	327	8,797	11,049	12,816	20,504	...	2	29	69
Trap rock	496	4,196	93	0.19	22	85	47	79	283	12	33	10	45
Sandstone	328	2,321	141	0.43	61	64	5	24	163	1	35	64	...
Slate and Stone, n.e.c	100	855	29	0.29	34	29	...	...	50	...	...	...	100
Sand and Gravel: Common sand and gravel	1,102	16,725	7,363	6.68	440	7,138	140	...	10,486	1	70	8	21
Glass sand and Foundry sand	247	2,128	2,100	8.50	987	2,100	...	...	2,100	...	100	...	...
Clay, ceramic, and refractory minerals: Fire clay	554	4,664	6	0.01	1	6	...	299	6	100	...	...	...
Kaolin and ball clay and Clay, ceramic, and refractory minerals, n.e.c	53	603	1	0.02	2	1	...	...	1	100	...	...	...
Peat	22	115	...	...	...	...	...	13	...	...	...	...	...
Other industries	17	149	...	...	...	...	...	...	...	...	...	...	...

xxx Not applicable.

NA Not available.

[1]Excludes water used for flooding in oil and gas fields.

[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 225 million gallons of brackish water.

[3]For computations of water intake per production worker, including mine water used, see table 2.

[4]Includes "not specified," as follows: in the Anthracite industry, 18 percent, and in the Bituminous coal industry, 2 percent.

[5]Less than one-half of the unit of measure specified.

[6]Represents "not specified."

[7]See table 2, footnote 10.

[8]For industries other than Natural gas liquids, includes water intake only.

RHODE ISLAND

138-1

MINING IN RHODE ISLAND: 1954

Rank among States:
Employment, 49
Value of shipments, 49

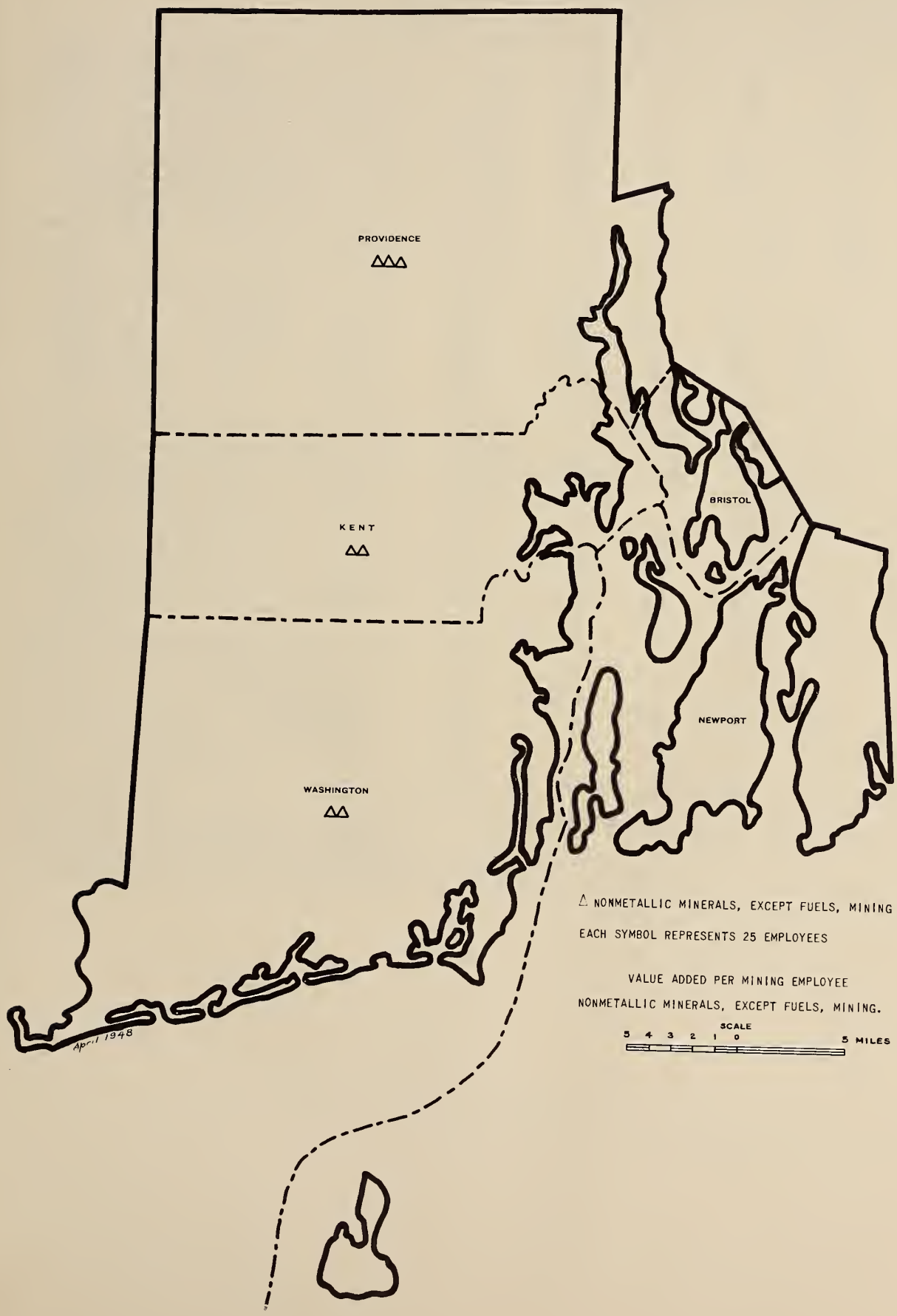




Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations		Comparative statistics excluding sand, gravel, common clay, and shale operations					
	1954[1]	1939	1954[1]	1939	1929[2]	1919	1909	1902[3]
Number of operating companies	21	20	7	10	(NA)	(NA)	21	22
Number of establishments	21	(NA)	7	(NA)	14	14	21	(NA)
Number of mines and quarries	21	21	7	11	14	15	27	22
Number of preparation plants	15	16	5	8	(NA)	(NA)	(NA)	(NA)
Value of shipments, $1,000	1,447	828	439	593	809	962	898	775
Value added in mining, do	1,109	623	314	449	590	758	740	690
Number of persons engaged, total	173	259	77	175	301	421	725	723
Production and development workers	140	212	65	144	256	369	665	667
All other employees	23	36	11	27	[4]34	46	42	56
Proprietors and firm members	10	11	1	4	11	6	18	
Performing manual labor	10	4	1	2		...	7	
Man-hours worked by production and development workers, 1,000	274	435	133	297	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total, $1,000	958	528	384	390	674	687	626	576
Wages of production and development workers, do	461	262	214	195	385	400	410	435
Salaries of all other employees, do	104	61	44	51	[4]70	83	58	56
Minerals received for preparation, do	...	(NA)	...	(NA)	(NA)	...	...	(NA)
Supplies, do	232	129	66	95	144	147	131	
Purchased fuel, do	106	44	23	23	37	46	27	85
Purchased electric energy, do	34	30	20	24	36	10		
Contract work, do	21	2	17	2	2	1	...	...
Purchased machinery installed, do	166		14		17	(NA)		
Capital expenditures, total, do	221	(NA)	15	(NA)	(NA)			
Development and exploration of mineral property, do	52		...		35	14	(NA)	(NA)
Preparation plant construction, do	23	13	1	11				
Other construction, do	14		...		(NA)	(NA)		
New machinery and equipment, do	77	34	14	11				
Used plant and equipment, do	55	...	...	...				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total, 1,000	19	7	6	5	4	3	2	1
Per production worker	136	33	81	35	16	8	3	2
Prime movers, 1,000	16	4	4	2	1	2	2	1
Electric motors driven by purchased energy, do	3	3	2	3	3	1	...	...
Horsepower rating of electric motors driven by energy generated at establishment, do	...	...	...	...	...	...	...	...
Energy used, million kwh equivalent	26	25	5	19	43	(NA)		
Coal, 1,000 short tons	([5])	2	([5])	2	5	6		
Fuel oils, 1,000 barrels	4	...	...	...	...	...	(NA)	(NA)
Gas, million cu.ft.	...	...	...	...	...	...		
Electric energy purchased, million kwh	([5])	1	([5])	1	2	(NA)		
Electric energy generated and used, do	...	...	...	...	...			

NA Not available.

[1]Except for number of operating companies, number of establishments, and number of mines and quarries, excludes data for 1 dimension granite operation classified in the manufacturing industries.

[2]Includes data for two sand and gravel establishments.

[3]May include lime plants producing lime valued at not more than $73,000.

[4]Excludes data for employees, if any, at central offices not included in reports for mining and mineral preparation establishments.

[5]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS, BY INDUSTRY GROUP AND INDUSTRY, 1954, AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION)

	Item	Rhode Island, total (mineral industries only)[1]	Sand and gravel	Other industries[2] (mineral industries only)
1	Number of operating companies	20	14	6
2	Number of establishments	20	14	6
	Number of mines, and quarries:			
3	1954	20	14	6
4	1939	[2]21	9	12
5	Number of preparation plants	14	10	4
	Value of shipments:			
6	1954 ..... $1,000	1,447	1,008	439
7	1939 ..... do	828	[3]235	[3]593
8	Value added in mining ..... do	1,109	795	314
9	Number of persons engaged, total	173	96	77
10	Production and development workers	140	75	65
11	All other employees	23	12	11
12	Proprietors and firm members	10	9	1
13	Performing manual labor	10	9	1
	Man-hours worked by production and development workers:			
14	1954 1,000	274	141	133
15	1939 ..... do	435	[3]138	[3]297
	At mines:			
16	Underground ..... do	5	...	5
17	Open-pit ..... do	153	82	71
18	Surface (mine shops, yards, etc.) ..... do	...	...	...
19	At preparation plants ..... do	116	59	57
20	Man-hours spent on development and exploration work (included above) ..... do	...	...	...
21	Principal expenses designated below, total $1,000	958	574	384
22	Wages of production and development workers ..... do	461	247	214
23	Salaries of all other employees ..... do	104	60	44
24	Minerals received for preparation ..... do	...	...	...
25	Supplies ..... do	232	166	66
	Purchased fuel:			
26	Coal ..... do	5	...	5
27	Fuel oil ..... do	28	27	1
28	Gas ..... do	...	...	...
29	Other fuels ..... do	73	56	17
30	Purchased electric energy ..... do	34	14	20
31	Contract work ..... do	21	4	17
32	Purchased machinery installed ..... do	166	152	14
33	Capital expenditures, total ..... do	221	206	15
34	Development and exploration of mineral property ..... do	52	52	...
35	Preparation plant construction ..... do	23	22	1
36	Other construction ..... do	14	14	...
37	New machinery and equipment ..... do	77	63	14
38	Used plant and equipment ..... do	55	55	...
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	19	13	6
40	Per production worker	136	170	81
41	Prime movers 1,000	16	12	4
42	Electric motors driven by purchased energy ..... do	3	1	2
43	Horsepower rating of electric motors driven by energy generated at establishment ..... do	...	...	...
44	Energy used ..... million kwh equivalent	26	21	5
45	Coal ..... 1,000 short tons	(4)	...	(4)
46	Fuel oil ..... 1,000 barrels	4	4	...
47	Gas ..... million cu.ft.	...	...	...
48	Electric energy purchased ..... million kwh	(4)	...	(4)
49	Electric energy generated and used ..... do	...	...	...
50	Water intake, including mine water used ..... million gallons	266	266	...
51	Per production worker ..... do	1.90	3.54	...

[1] In addition, 1 dimension granite operation classified in the manufacturing industries was reported.

[2] For 1954, represents dimension granite; crushed and broken limestone, granite, and stone n.e.c; and miscellaneous nonmetallic minerals, n.e.c. (graphite only). For 1939, represents dimension granite; and crushed and broken limestone, granite, basalt, and stone, n.e.c.

[3] Figures for the sand and gravel industry include, but those for other industries exclude, data for 1 common clay and shale mine.

[4] Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees		Man-hours worked by production and development workers (1,000)	Wages and salaries		New capital expenditures ($1,000)
				Production and development workers	All other employees		Production and development workers ($1,000)	All other employees ($1,000)	
Rhode Island (mineral industries only)	20	1,447	1,109	140	23	274	461	104	166
Nonmetallic minerals (except fuels) mining:									
Sand and gravel	14	1,008	795	75	12	141	247	60	151
Other industries (mineral industries only)	6	439	314	65	11	133	214	44	15
Kent and Newport	7	439	357	42	7	73	125	28	31
Providence	7	749	488	64	7	132	210	50	54
Washington (mineral industries only)	6	259	264	34	9	69	126	26	81

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Rhode Island, all industries			Nonmetallic minerals (except fuels) mining							
				Dimension granite		Crushed and broken stone			Sand and gravel		Miscellaneous nonmetallic minerals, n.e.c. (Graphite)
	Total	Classified in mineral industries	Included in manufacturing	Classified in mineral industries	Included in manufactures	Limestone	Granite	Stone, n.e.c.	Common sand and gravel	Foundry sand	
Rhode Island, total	21	20	1	2	1	1	1	1	13	1	1
Kent	5	5	...	...	...	...	...	...	4	1	...
Newport	2	2	...	...	...	...	...	1	1	...	...
Providence	7	7	...	...	...	1	1	...	4	...	1
Washington	7	6	1	2	1	...	...	...	4	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Rhode Island, all mineral operations:												
Including operations classified in manufactures	21	1	10	1	6	3	...	...	...	...	...	...
Mineral industries only	20	1	10	1	5	3	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Dimension granite:												
Classified in mineral industries	2	...	1	...	...	1	...	...	...	...	...	...
Included in manufactures	1	...	...	...	1	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone	1	...	...	...	1	...	...	...	...	...	...	...
Granite	1	...	...	...	...	1	...	...	...	...	...	...
Stone, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	13	1	7	...	4	1	...	...	...	...	...	...
Foundry sand	1	...	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c. (graphite)	1	...	...	1	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Rhode Island, total	140	1,109	264	1.89	238	254	2	...	269	8	92	...	...
Nonmetallic minerals (except fuels) mining:													
Sand and gravel	75	795	264	3.52	332	254	2	...	269	8	92	...	...
Other industries	65	314	...	...	...	...	...	...	...	...	...	...	...

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SOUTH CAROLINA

139-1

MINING IN SOUTH CAROLINA: 1954

Rank among States:
Employment, 41
Value of shipments, 42

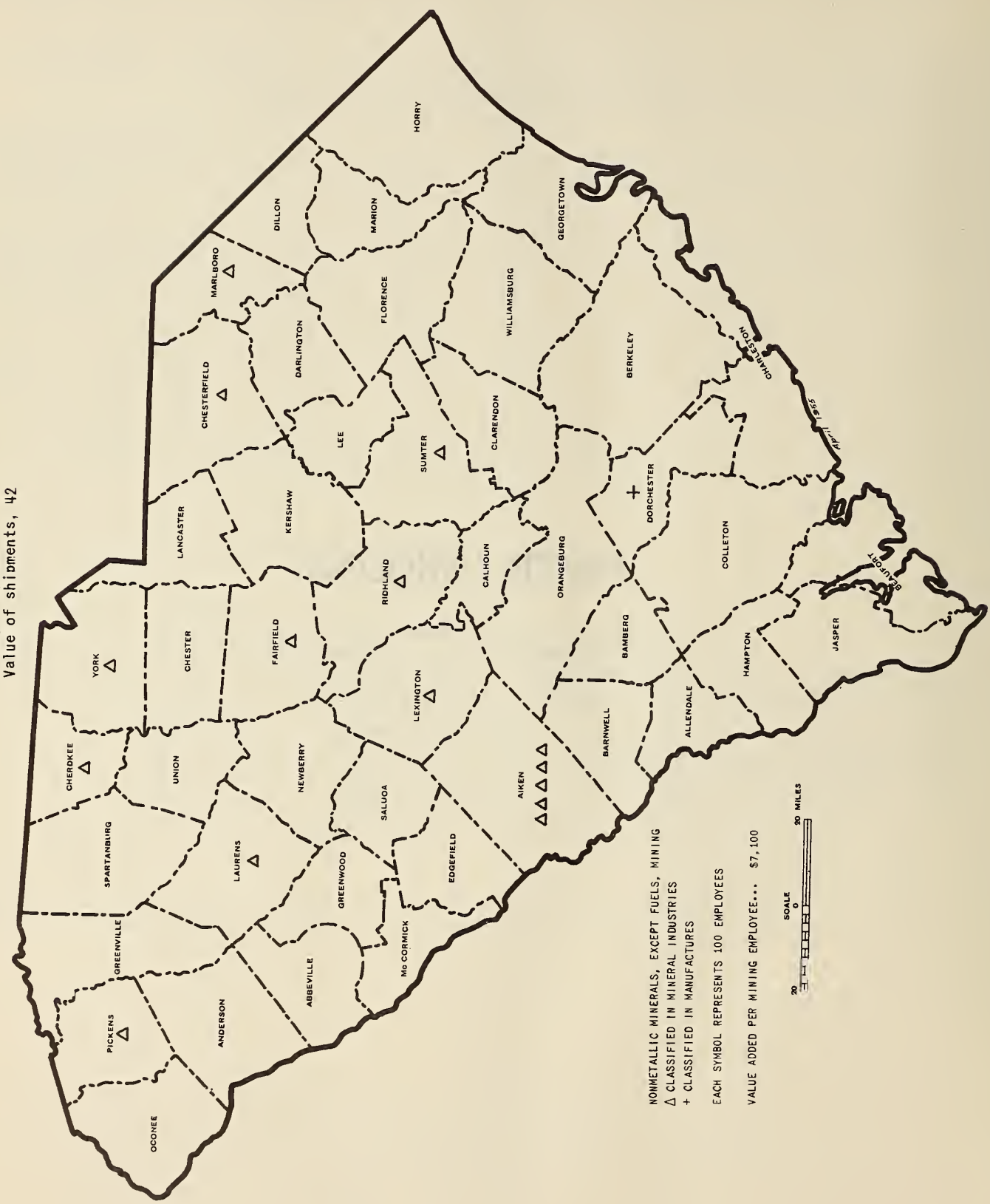


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1954, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement and lime establishments					
	1954	1939[1]	1929[2]	1954	1939[1 3]	1929[4]	1919	1909	1902[5]
Number of operating companies	64	34	(NA)	19	[6]19	(NA)	(NA)	[6]29	[6]42
Number of establishments	72	(NA)	33	20	(NA)	26	20	32	(NA)
Number of mines and quarries	77	44	35	20	25	27	20	32	38
Number of preparation plants	48	23	(NA)	15	16	(NA)	(NA)	(NA)	(NA)
Value of shipments[7]...$1,000	14,184	3,457	3,093	5,508	3,112	2,698	1,351	1,253	1,834
Value added in mining...do	11,229	2,389	2,369	4,474	2,149	2,060	898	1,003	1,492
Number of persons engaged, total	1,556	1,400	1,423	635	1,195	1,276	1,008	1,889	2,8[illegible]
Production and development workers	1,372	1,291	1,298	570	1,112	1,183	933	1,824	[8]2,69[illegible]
All other employees	146	97	[9]118	56	76	[9]86	60	52	148
Proprietors and firm members	38	12	7	9	7	7	15	13	(NA)
Performing manual labor	24	4	(NA)	8	4	(NA)	2	3	(NA)
Man-hours worked by production and development workers...1,000	3,102	2,756	(NA)	1,329	2,419	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	7,959	2,132	1,952	3,480	1,892	1,719	1,273	958	1,361
Wages of production and development workers...do	3,591	782	930	1,510	689	846	680	626	892
Salaries of all other employees...do	765	282	[9]298	332	240	[9]235	140	82	127
Minerals received for preparation...do	4	(NA)	(NA)	4	(NA)	(NA)	...	...	(NA)
Supplies...do	[10]2,363	698	393	1,175	650	349	303	125	
Purchased fuel...do	[10]608	135	145	155	95	112	122	118	342
Purchased electric energy...do	[10]460	177	178	189	161	175	28		
Contract work...do	[10]168	58	8	115	57	2	...	7	...
Purchased machinery installed...do	[11]1,298		153	833		149	(NA)		
Capital expenditures, total...do	[11]1,946	(NA)	(NA)	1,437	(NA)	(NA)	(NA)		
Development and exploration of mineral property...do	[11]82		...	59		...	112	(NA)	(NA)
Preparation plant construction...do	[11]546	26		532	25				
Other construction...do	[11]153		(NA)	96		(NA)	(NA)		
New machinery and equipment...do	[11]452	140		212	131				
Used plant and equipment...do	[11]713	22		538	16				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	[11]86	20	18	32	16	17	5	7	5
Per production worker	63	16	14	56	14	14	5	4	2
Prime movers...1,000	[11]58	8	4	18	5	3	3	7	5
Electric motors driven by purchased energy...do	[11]28	12	14	14	11	14	2	...	...
Horsepower rating of electric motors driven by energy generated at establishment...do	...	1	([12])	...	([12])	([12])	([12])	...	([12])
Energy used...million kwh equivalent	[11]288	133	200	59	86	156	(NA)		
Coal...1,000 short tons	[11]1	11	23	...	8	18	19		
Fuel oils...1,000 barrels	[11]69	4	1	16	2	([12])	...	(NA)	(NA)
Gas...million cu.ft	[11]223	...	...	...	...	...	...		
Electric energy purchased...million kwh	[11]41	13	11	16	12	11	(NA)		
Electric energy generated and used...do	...	([12])	...	...	([12])	...	(NA)		

NA Not available.

[1]Excludes data for dimension stone dressing, if any, at one dimension granite quarry and data for 2 contract service operations.

[2]Excludes data for common clay operations. There were 12 such mines in 1939 with products valued at $75,000.

[3]Includes data for one or more stone quarries operated as part of lime establishments and for one glass sand mine and preparation plant.

[4]Excludes data for one barite establishment.

[5]Represents producing operations only. Excludes data for one nonproducing operation. May include data for one lime plant.

[6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[9]Excludes data for employees, if any, at central offices not included in reports for mining and mineral preparation establishments.

[10]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[11]Excludes statistics for crushed stone and clay operations classified in manufactures.

[12]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION)

	Item	South Carolina, total		Stone		Sand and gravel	Clay, ceramic, and refractory minerals		Other industries[1]
		Including operations classified in manufactures	Mineral industries only	Total, including operations classified in manufactures	Crushed and broken granite (mineral industries only)		Total, including operations classified in manufactures	Kaolin and ball clay (mineral industries only)	
1	Number of operating companies	64	48	8	5	22	24	6	10
2	Number of establishments	72	56	11	5	27	24	6	10
	Number of mines and quarries:								
3	1954	77	61	11	5	27	29	11	10
4	1939	44	(NA)	9	4	8	24	12	3
5	Number of preparation plants	48	41	9	5	22	9	6	8
	Value of shipments:[2]								
6	1954 ..... $1,000	14,184	12,852	4,964	3,168	2,738	5,525	4,104	957
7	1939[3] ..... do	3,457	(NA)	[4]1,500	1,261	[4]270	1,168	1,093	[4]519
8	Value added in mining ..... do	11,229	10,097	3,833	2,167	2,182	4,260	3,009	954
9	Number of persons engaged, total	1,556	1,460	526	322	348	536	416	146
10	Production and development workers	1,372	1,276	481	287	285	480	366	126
11	All other employees	146	146	43	33	38	52	47	13
12	Proprietors and firm members	38	38	2	2	25	4	3	7
13	Performing manual labor	24	24	2	2	13	3	3	6
	Man-hours worked by production and development workers:								
14	1954 1,000	3,102	2,909	1,147	724	678	1,021	758	256
15	1939[3] ..... do	2,756	(NA)	[4]1,194	877	[4]233	823	719	[4]506
	At mines:								
16	Underground ..... do	146	146	146	...	...	...	...	...
17	Open-pit ..... do	954	761	328	193	177	369	199	80
18	Surface (mine shops, yards, etc.) ..... do	174	174	114	71	35	2	2	23
19	At preparation plants ..... do	1,828	1,828	559	460	466	650	557	153
20	Man-hours spent on development and exploration work (included above) ..... do	50	50	48	...	...	1	1	1
21	Principal expenses designated below, total $1,000	7,959	7,498	3,051	2,009	1,530	2,718	2,247	660
22	Wages of production and development workers ..... do	3,591	3,330	1,213	716	768	1,182	916	428
23	Salaries of all other employees ..... do	765	765	287	228	154	279	244	45
24	Minerals received for preparation ..... do	4	4	...	...	(NA)	...	...	...
25	Supplies ..... do	[5]2,363	2,163	[5]1,212	824	260	[5]828	704	67
	Purchased fuel:								
26	Coal ..... do	[5]12	12	[5]4	4	8	...	...	...
27	Fuel oil ..... do	[5]297	297	[5]60	44	74	[5]143	120	20
28	Natural gas ..... do	[5]78	78	...	...	...	78	78	...
29	Other fuels ..... do	[5]221	221	[5]64	54	90	[5]60	59	7
30	Purchased electric energy ..... do	[5]460	460	[5]174	133	138	[5]133	111	15
31	Contract work ..... do	[5]168	168	[5]37	6	38	[5]15	15	78
32	Purchased machinery installed ..... do	[6]1,298	1,298	[6]240	191	301	[6]164	159	593
33	Capital expenditures, total ..... do	[6]1,946	1,946	[6]660	255	353	[6]156	151	777
34	Development and exploration of mineral property ..... do	[6]82	82	...	...	19	[6]4	4	59
35	Preparation plant construction ..... do	[6]546	546	[6]451	83	7	[6]7	7	81
36	Other construction ..... do	[6]153	153	[6]66	62	51	[6]6	6	30
37	New machinery and equipment ..... do	[6]452	452	[6]127	109	106	[6]134	134	85
38	Used plant and equipment ..... do	[6]713	713	[6]16	1	170	[6]5	...	522
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[6]86	86	[6]28	20	31	[6]23	20	4
40	Per production worker	63	63	58	68	108	48	55	32
41	Prime movers 1,000	[6]58	58	[6]14	9	23	[6]17	14	4
42	Electric motors driven by purchased energy ..... do	[6]28	28	[6]14	11	8	[6]6	6	([7])
43	Horsepower rating of electric motors driven by energy generated at establishment ..... do	...	...	...	...	...	...	...	...
44	Energy used ..... million kwh equivalent	[6]288	288	[6]50	39	70	[6]159	148	9
45	Coal ..... 1,000 short tons	[6]1	1	([7])	([7])	1	...	...	...
46	Fuel oil ..... 1,000 barrels	[6]69	69	[6]12	8	16	[6]37	32	4
47	Gas ..... million cu.ft	[6]223	223	...	...	...	[6]223	223	...
48	Electric energy purchased ..... million kwh	[6]41	41	[6]15	12	13	[6]12	10	1
49	Electric energy generated and used ..... do	...	...	...	...	...	...	...	...
50	Water intake, including mine water used ..... million gallons	[6]3,238	3,238	[6]662	533	2,550	[6]17	7	9
51	Per production worker ..... do	2.36	2.36	1.38	1.86	8.95	0.04	0.02	0.07

NA Not available. [1]For industries included, see table 4. [2]See table 1, footnote 7. [3]See table 1, footnote 1. [4]Figures for one dimension granite quarry and for one glass sand mine are included with those for Other industries. [5]See table 1, footnote 10. [6]See table 1, footnote 11. [7]See table 1, footnote 12.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

Industry and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	[illegible] ($1,000)
[illegible], all mineral companies:									
Mining operations in manufacturing industries	72	14,154	11,229	1,372	146	3,102	3,591	765	
Mining industries only	56	12,852	10,097	1,276	146	2,909	3,330	765	
Metal mining and nonmetallic minerals (except fuels) mining:									
Dimension stone and crushed and broken stone, including operations in manufacturing	11	4,954	3,833	481	43	1,147	1,213	287	
Sand and gravel	27	2,738	2,182	285	38	678	768	154	
Clay, ceramic, and refractory minerals mining operations in manufacturing	24	5,925	4,260	480	52	1,021	1,182	279	
Chemical and fertilizer mineral mining, and miscellaneous nonmetallic minerals (except fuels)	10	967	964	126	13	256	428	45	
[illegible]									
[illegible] industries only	18	4,494	3,382	406	54	845	1,037	275	
Clay, ceramic, and refractory minerals industries only	6	4,104	3,009	366	47	758	916	244	
[illegible]	3	175	132	13	4	31	29	9	
[illegible] industries only	3	158	450	51	6	106	133	6	
[illegible] including operations in manufacturing	5	625	484	61	...	122	196	...	
[illegible] including operations in manufacturing	5	144	123	16	...	30	31	...	
[illegible] industries only	6	949	625	102	29	232	260	201	
[illegible] including operations in manufacturing	6	1,367	693	100	5	233	249	15	

(1) [illegible].

See [illegible], Introduction.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All operations			Metal mining (metallic minerals, n.e.c.)	Nonmetallic minerals (except fuels) mining				
					Dimension granite	Crushed and broken stone			
						Limestone		Granite	Stone, n.e.c.
	Total	Classified in mineral industries	Included in manufactures			Classified in mineral industries	Included in manufactures		
South Carolina, total	72	56	16	1	1	2	1	5	2
Aiken	11	10	1	1	...	...	...	...	...
Anderson	2	2	...	...	...	...	...	...	...
Charleston	3	3	...	...	...	...	...	...	1
Cherokee	4	3	1	...	...	1	...	...	...
Chesterfield	3	2	1	...	...	...	...	...	...
Darlington	1	...	1	...	...	...	...	...	...
Dorchester	5	3	2	...	...	...	1	...	...
Fairfield	3	2	1	...	1	...	...	1	...
Florence	1	1	...	...	...	...	...	...	...
Greenville	3	3	...	...	...	...	...	...	...
Greenwood	5	3	2	...	...	...	...	1	...
Horry	1	1	...	...	...	...	...	...	...
Jasper	1	1	...	...	...	...	...	...	...
Kershaw	1	1	...	...	...	...	...	...	...
Lancaster	2	1	1	...	...	...	...	...	1
Laurens	3	3	...	...	...	...	...	...	...
Lexington	7	6	1	...	...	...	...	1	...
Marion	1	...	1	...	...	...	...	...	...
Marlboro	2	1	1	...	...	...	...	...	...
Oconee	1	1	...	...	...	...	...	...	...
Pickens	1	1	...	...	...	...	...	1	...
Richland	6	3	3	...	...	...	...	1	...
Spartanburg	1	1	...	...	...	1	...	...	...
Sumter	1	1	...	...	...	...	...	...	...
Union	1	1	...	...	...	...	...	...	...
Williamsburg	1	1	...	...	...	...	...	...	...
York	1	1	...	...	...	...	...	...	...

County	Nonmetallic minerals (except fuels) mining—Continued									
	Sand and gravel		Clay, ceramic, and refractory minerals					Barite	Miscellaneous nonmetallic minerals (except fuels)	
				Kaolin and ball clay		Clay, ceramic, and refractory minerals, n.e.c.				
	Common sand and gravel	Glass sand	Fire clay	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures		Mica	Vermiculite
South Carolina, total	24	3	1	6	2	2	13	1	4	4
Aiken	3	...	...	6	...	...	1	...	...	...
Anderson	...	...	...	...	...	...	...	...	2	...
Charleston	2	...	...	...	...	...	...	...	...	...
Cherokee	1	...	...	...	...	...	1	1	...	...
Chesterfield	2	...	...	...	...	...	1	...	...	...
Darlington	...	...	...	...	...	...	1	...	...	...
Dorchester	1	1	...	...	...	1	1	...	...	...
Fairfield	...	...	...	...	...	...	1	...	...	...
Florence	1	...	...	...	...	...	...	...	...	...
Greenville	2	...	...	...	...	...	...	...	1	...
Greenwood	1	1	...	...	...	...	2	...	...	...
Horry	...	1	...	...	...	...	...	...	...	...
Jasper	1	...	...	...	...	...	...	...	...	...
Kershaw	...	...	1	...	...	...	...	...	...	...
Lancaster	...	...	...	...	...	...	1	...	...	...
Laurens	...	...	...	...	...	...	...	...	...	3
Lexington	5	...	...	...	...	...	1	...	...	...
Marion	...	...	...	...	...	...	1	...	...	...
Marlboro	1	...	...	...	...	...	1	...	...	...
Oconee	...	...	...	...	...	...	...	...	1	...
Pickens	...	...	...	...	...	...	...	...	...	...
Richland	2	...	...	...	2	...	1	...	...	...
Spartanburg	...	...	...	...	...	...	...	...	...	...
Sumter	1	...	...	...	...	...	...	...	...	...
Union	...	...	...	...	...	...	...	...	...	1
Williamsburg	1	...	...	...	...	...	...	...	...	...
York	...	...	...	...	...	1	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
South Carolina, all mineral operations:												
Including operations classified in manufactures	72	4	27	12	10	8	8	3	...	...	...	...
Mineral industries only	56	4	18	10	6	7	8	3	...	...	...	...
Metal mining (metallic minerals, n.e.c.)	1	...	...	1	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	71	4	27	11	10	8	8	3	...	...	...	...
Mineral industries only	55	4	18	9	6	7	8	3	...	...	...	...
Dimension granite (mineral industries only)	1	...	...	...	...	...	1	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	2	...	...	...	...	2	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	1	...	...	...	...	...	...
Granite	5	...	1	...	...	...	4	...	...	...	...	...
Stone, n.e.c	2	...	...	1	...	1	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	24	...	10	7	3	2	2	...	...	...	...	...
Glass sand	3	1	1	...	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay	1	...	1	...	...	...	...	...	...	...	...	...
Kaolin and ball clay:												
Classified in mineral industries	6	...	...	1	1	2	...	2	...	...	...	...
Included in manufactures	2	...	1	1	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	2	...	1	...	...	...	1	...	...	...	...	...
Included in manufactures	13	...	8	1	4	...	...	...	...	...	...	...
Barite	1	...	...	...	1	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Mica	4	3	1	...	...	...	...	...	...	...	...	...
Vermiculite	4	...	3	...	...	...	...	1	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
South Carolina, total.....	1,276	10,097	2,748	2.15	272	2,705	490	247	3,661	7	93	(2)	...
Stone:													
Crushed and broken granite...	287	2,167	363	1.26	168	345	170	247	567	49	51	...	...
Dimension granite and Crushed and broken limestone and stone, n.e.c.....	(D)	(D)	120	(D)	(D)	111	9	...	129	...	100	...	...
Sand and gravel.....	285	2,182	2,239	7.86	1,026	2,223	311	...	2,939	...	100	...	...
Clay, ceramic, and refractory minerals:													
Kaolin and ball clay.....	366	3,009	7	0.02	2	7	...	...	7	...	...	100	...
Fire clay and Clay, ceramic, and refractory minerals, n.e.c.....	(D)	(D)	10	(D)	(D)	10	...	...	10	100	...	...	...
Other industries[3].....	126	954	9	0.07	9	9	...	...	9	...	100	...	...

D Withheld to avoid approximately disclosing figures for individual companies.
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]Less than 0.5 percent.
[3]For industries included, see table 4.

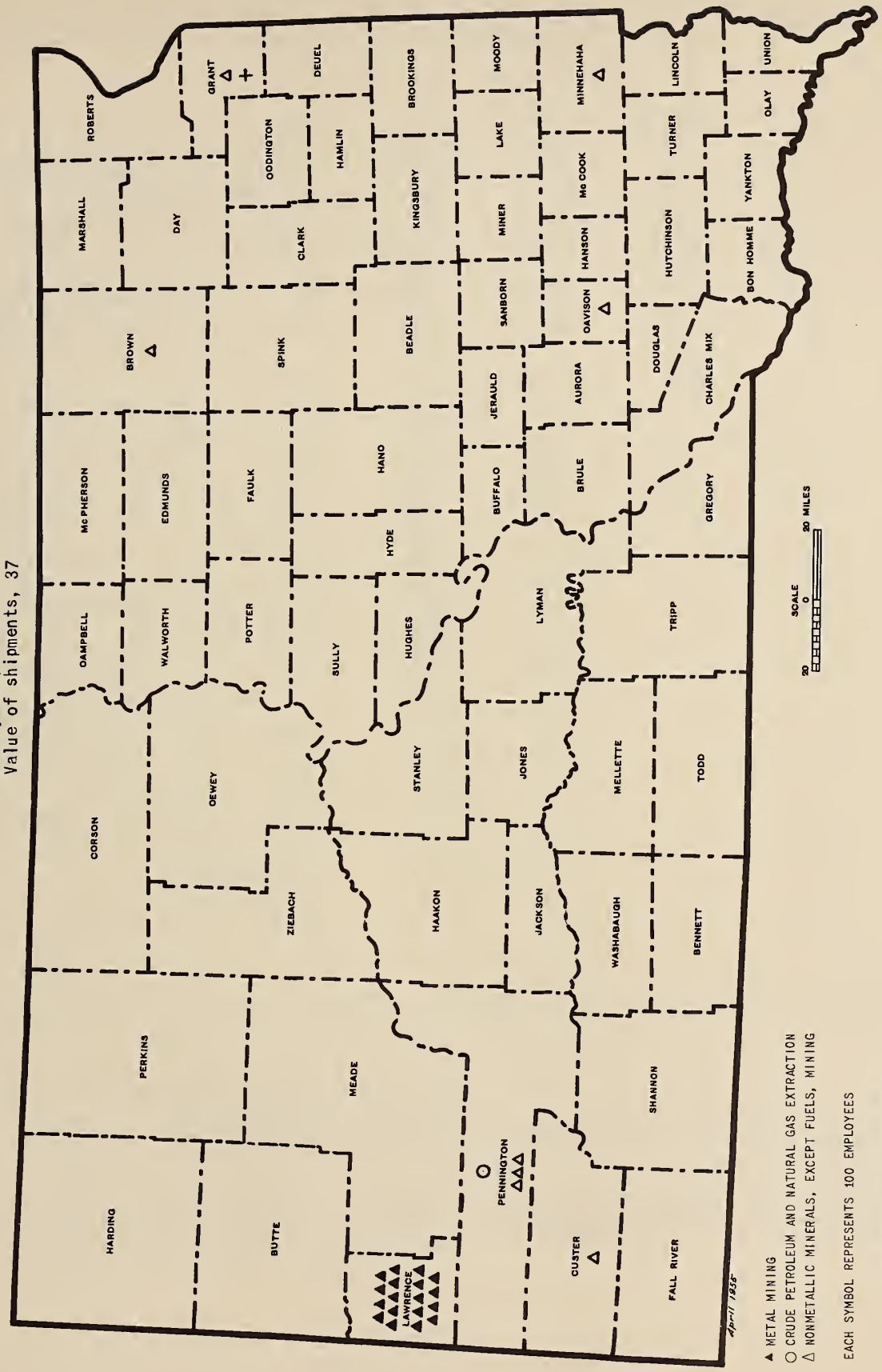
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SOUTH DAKOTA

140-1

MINING IN SOUTH DAKOTA: 1954

Rank among States:
Employment, 35
Value of shipments, 37



▲ METAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS, EXCEPT FUELS, MINING

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$8,500
NONMETALLIC MINERALS, EXCEPT FUELS, MINING	8,300



Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes common clay and shale and contract service operations, and for years prior to 1929, excludes sand and gravel operations)

Item	1954	1939[1]	1929[2]	1919	1909	1902[3]
Number of operating companies	179	60	(NA)	(NA)	[4]55	[4]191
Number of establishments	191	(NA)	42	28	55	(NA)
Number of mines and quarries	181	56	42	33	62	185
Number of oil and gas wells producing at end of year	4	2	(NA)	1	3	6
Number of preparation plants	97	24	(NA)	(NA)	(NA)	(NA)
Value of shipments[5]....$1,000	[6]32,454	22,882	7,620	5,315	6,432	6,769
Value added in mining....do	[6]23,257	20,689	5,955	3,932	4,866	4,602
Number of persons engaged, total	3,182	2,950	1,725	1,958	3,698	3,919
Production and development workers	2,606	2,647	1,586	1,854	3,553	[7]3,653
All other employees	395	275	[8]127	88	106	266
Proprietors and firm members	181	28	12	16	39	(NA)
Performing manual labor	129	20	(NA)	11	13	(NA)
Man-hours worked by production and development workers....1,000	5,872	5,988	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000	22,899	7,735	4,726	4,203	5,100	6,480
Wages of production and development workers....do	10,321	4,690	2,647	2,597	3,309	3,956
Salaries of all other employees....do	1,933	852	[8]414	223	225	357
Minerals received for preparation....do	592	(NA)	(NA)	...	55	
Supplies....do	6,218	1,716	[9]1,446	1,063	1,073	2,159
Purchased fuel....do	1,132	284	[9]189	248	426	
Purchased electric energy....do	430	172	[9]29	50		
Contract work....do	2,273	21	1	22	12	8
Purchased machinery installed....do	2,114		37	(NA)		
Capital expenditures, total....do	3,562	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do	1,145		599	191	(NA)	(NA)
Preparation plant construction....do	551	352				
Other construction....do	141		(NA)	(NA)		
New machinery and equipment....do	1,445	695				
Used plant and equipment....do	280	43				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	133	46	26	13	16	14
Per production worker	51	18	16	7	5	4
Prime movers....1,000	107	38	23	11	12	14
Electric motors driven by purchased energy....do	26	8	3	2	4	...
Horsepower rating of electric motors driven by energy generated at establishment....do	47	30	16	12	1	([10])
Energy used....million kwh equivalent	766	557	353	(NA)		
Coal....1,000 short tons	61	60	44	43		
Fuel oils....1,000 barrels	92	2	3	3	(NA)	(NA)
Gas....million cu.ft	471	240	6	...		
Electric energy purchased....million kwh	32	11	1	(NA)		
Electric energy generated and used....do	57	55	46	(NA)		

NA Not available.

[1]Except for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing granite and sandstone at such operations was $197,000; this value has been included in the value of shipments and value added in mining.

[2]Excludes data for operations in the crude petroleum and natural gas extraction industries, if any. Includes data for one establishment in North Dakota.

[3]Includes data for lime plants producing lime valued at $21,000.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[6]Excludes figures for the Uranium-radium-vanadium ores industry. No data on value of shipments were obtained for this industry for 1954.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]For nonproducing establishments, figures for fuels and electric energy are included with those for supplies.

[10]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	South Dakota, total		Metal mining			
		Including operations classified in manufactures	Mineral industries only	Total[1]	Lode gold	Uranium-radium-vanadium ores	Metallic ores, n.e.c.
1	Number of operating companies	179	175	42	6	15	18
2	Number of establishments	191	187	43	6	15	19
	Number of mines, quarries, and producing oil and gas wells:						
3	1954	181	177	41	6	15	19
4	1939	58	(NA)	8	8	...	...
5	Number of preparation plants	97	95	6	4	...	2
	Value of shipments:[4]						
6	1954....$1,000..	32,454	31,314	[5]19,268	19,088	(NA)	136
7	1939....do....	22,882	(NA)	21,681	21,676	...	...
8	Value added in mining....do....	23,257	22,343	[5]15,494	15,439	(NA)	114
9	Number of persons engaged, total	3,182	3,051	1,863	1,773	53	34
10	Production and development workers	2,606	2,497	1,594	1,549	34	11
11	All other employees	395	373	225	222	3	...
12	Proprietors and firm members	181	181	44	2	16	23
13	Performing manual labor	129	129	40	...	15	22
	Man-hours worked by production and development workers:						
14	1954....1,000..	5,872	5,651	3,545	3,452	70	23
15	1939[7]....do....	5,988	(NA)	[8]5,322	5,295	...	...
	At mines:						
16	Underground....do....	1,911	1,911	1,875	1,843	29	3
17	Open-pit....do....	899	845	52	1	32	19
18	Surface (mine shops, yards, etc.)....do....	1,367	1,367	1,271	1,262	9	...
19	At preparation plants....do....	1,621	1,454	347	346	...	1
20	At oil and gas field operations....do....	74	74	...	...	...	...
21	Man-hours spent on development and exploration work (included above)....do....	337	327	253	226	22	5
22	Principal expenses designated below, total....$1,000..	22,899	22,155	12,076	11,677	308	62
23	Wages of production and development workers....do....	10,321	9,936	6,622	6,458	128	36
24	Salaries of all other employees....do....	1,933	1,813	1,160	1,134	26	...
25	Minerals received for preparation....do....	592	592	...	...	...	...
26	Supplies....do....	6,218	6,026	3,643	3,588	47	4
	Purchased fuel:						
27	Coal....do....	261	258	257	257	...	...
28	Fuel oil....do....	238	234	34	19	15	...
29	Gas....do....	148	148	35	35	...	...
30	Other fuels....do....	485	484	47	44	...	3
31	Purchased electric energy....do....	430	395	138	137	...	1
32	Contract work....do....	2,273	2,269	140	5	92	18
33	Purchased machinery installed....do....	2,114	2,101	509	323	170	5
34	Capital expenditures, total....do....	3,562	3,536	1,029	759	248	9
35	Development and exploration of mineral property....do....	1,145	1,143	317	231	82	4
36	Preparation plant construction....do....	551	551	244	243	...	1
37	Other construction....do....	141	141	127	119	6	...
38	New machinery and equipment....do....	1,445	1,427	259	157	91	...
39	Used plant and equipment....do....	280	274	82	9	69	4
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000..	133	130	42	37	4	1
41	Per production worker	51	52	26	24	118	91
42	Prime movers....1,000..	107	106	32	27	4	1
43	Electric motors driven by purchased energy....do....	26	24	10	10	(11)	(11)
44	Horsepower rating of electric motors driven by energy generated at establishment....do....	47	47	47	47	...	(11)
45	Energy used....million kwh equivalent..	766	759	526	521	4	1
46	Coal....1,000 short tons..	61	61	61	61	...	...
47	Fuel oil....1,000 barrels..	92	91	31	3	1	...
48	Gas....million cu.ft...	471	471	67	67	...	...
49	Electric energy purchased....million kwh..	32	30	14	14	...	...
50	Electric energy generated and used....do....	57	57	57	57	...	...
51	Water intake, including mine water used....million gallons..	3,565	3,565	2,711	2,711	...	...
52	Per production worker....do....	1.37	1.43	1.75	1.75	...	...

NA Not available. xxx Not applicable. [1]Includes, in addition to the industries shown separately, data for one columbium ores establishment and 2 metal mining contract services establishments. [2]Includes data for 3 dimension sandstone mines. [3]Includes data for one crushed and broken granite mine and for one or more limestone quarries operated as part of lime plants. [4]See table 1, footnote 5. [5]See table 1, footnote 6. [6]Not shown since cost of supplies, fuel, purchased electric energy, contract work, and purchased machinery installed exceeds value of shipments plus capital expenditures.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Lignite mining and Crude petroleum and natural gas extraction	Nonmetallic minerals (except fuels) mining							
	Total		Dimension granite (including operations classified in manufactures)	Crushed and broken stone (mineral industries only)		Feldspar	Other nonmetallic minerals (except fuels) mining (including operations classified in manufactures)	
	Including operations classified in manufactures	Mineral industries only		Limestone	Sandstone			
25	113	109	8	6	4	13	88	1
25	123	119	8	6	4	14	91	2
6	134	130	8	6	3	27	90	3
6	44	(NA)	[2]9	[3]5	4	12	14	4
...	91	89	2	6	4	3	76	5
331	12,855	11,715	1,568	1,010	1,716	800	7,761	6
79	1,122	(NA)	[2]411	[3]101	159	95	356	7
([6])	8,915	8,001	1,192	682	809	502	5,730	8
99	1,220	1,089	195	117	92	98	718	9
39	973	864	167	103	85	72	546	10
48	122	100	27	8	7	2	78	11
12	125	125	1	6	...	24	94	12
1	88	88	1	4	...	23	60	13
90	2,237	2,016	340	224	222	180	1,271	14
[8]45	621	(NA)	[2]170	[3]99	114	[8]94	144	15
...	36	36	...	...	...	...	36	16
14	833	779	169	84	72	101	407	17
2	94	94	4	34	50	...	6	18
...	1,274	1,107	167	106	100	79	822	19
74	...	...	...	...	...	...	...	20
41	43	43	...	...	...	...	43	21
2,602	8,221	7,477	1,094	924	1,164	545	4,494	22
180	3,519	3,134	573	345	365	218	2,018	23
262	511	391	139	48	24	8	292	24
...	592	592	...	...	...	...	592	25
368	2,207	2,015	220	445	669	167	[9]706	26
...	4	1	4	...	...	...	...	27
23	181	177	10	20	23	14	[9]114	28
...	113	113	...	1	...	...	[9]112	29
16	422	421	3	32	30	6	[9]351	30
1	291	256	58	23	53	35	[9]122	31
1,752	381	377	87	10	...	97	[9]187	32
85	1,520	1,507	45	284	253	30	[10]908	33
762	1,771	1,745	51	487	121	51	[10]1,061	34
688	140	138	3	...	...	3	[10]134	35
xxx	307	307	...	207	...	4	[10]96	36
4	10	10	...	3	...	...	[10]7	37
67	1,119	1,101	37	254	121	42	[10]665	38
3	195	189	11	23	...	2	[10]159	39
4	87	84	5	7	10	6	[10]59	40
91	89	97	31	64	117	90	108	41
4	71	70	2	5	6	5	[10]53	42
...	16	14	3	2	4	1	[10]6	43
...	([11])	([11])	([11])	...	...	...	([11])	44
...	240	233	7	19	19	11	[10]184	45
...	...	...	([11])	...	...	...	...	46
3	58	57	2	4	5	4	[10]43	47
...	404	404	...	9	...	...	[10]395	48
([11])	18	16	3	1	3	3	[10]8	49
...	...	...	...	...	...	...	...	50
2	852	852	...	32	147	...	[10]673	51
0.05	0.88	0.99	...	0.31	1.73	...	1.23	52

[7]See table 1, footnote 1. [8]Data for one nonproducing crude petroleum and natural gas operation and one nonproducing feldspar mine are included with those for metal mining. [9]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figures for supplies. [10]Excludes statistics for crushed stone and clay operations classified in manufactures.
[11]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
South Dakota, all mineral operations: Including operations in manufactures	191	[2]32,454	[2]23,257	2,606	395	5,872	10,321	1,933	3,285
Mineral industries only	187	[2]31,314	[2]22,343	2,497	373	5,651	9,936	1,813	3,265
Metal mining	43	[2]19,268	[2]15,494	1,594	225	3,545	6,622	1,160	947
Lode gold	6	19,088	15,439	1,549	222	3,452	6,458	1,134	750
Ferro-alloy ores, except vanadium; Metal mining contract services; and Miscellaneous metal ores	37	[2]180	[2]55	45	3	93	164	26	197
Lignite mining and Crude petroleum and natural gas extraction[3]	25	331	([4])	39	48	90	180	262	762
Nonmetallic minerals (except fuels) mining: Including operations in manufactures	123	12,855	8,915	973	122	2,237	3,519	511	1,576
Mineral industries only	119	11,715	8,001	864	100	2,016	3,134	391	1,556
Dimension stone (including operations in manufactures)	8	1,568	1,192	167	27	340	573	139	40
Crushed and broken stone (mineral industries only)	10	2,726	1,491	188	15	446	710	72	[5]585
Crushed and broken stone classified in manufactures; Sand and gravel; Clay, ceramic, and refractory minerals; Chemicel and fertilizer mineral mining; Nonmetallic minerals (except fuels) contract services; and Miscelleneous nonmetallic minerals (except fuels) mining (including operations in manufectures)	105	8,561	6,232	618	80	1,451	2,236	300	[5]951
COUNTY									
Codington	3	108	125	14	7	36	55	24	45
Custer (minerel industriee only)	37	[2]779	[2]515	68	4	164	222	23	139
Metal mining	16	[2]119	[2]83	9	...	17	35	...	70
Clay, ceramic, and refractory minerals	10	500	322	39	1	105	122	4	17
Fall River	12	(NA)	(NA)	14	3	18	40	25	82
Grant (mineral industries only)	7	466	307	62	5	128	199	19	21
Lawrence	9	19,241	15,541	1,566	224	3,482	6,505	1,138	767
Minnehaha	7	1,719	854	91	11	210	353	62	131
Pennington	27	2,674	2,126	320	35	771	1,222	181	840
Crushed and broken stone	4	638	445	72	2	155	250	11	462
Sand and grevel	4	1,126	963	121	11	304	506	59	66
Clay, ceramic, and refractory minerals	6	436	288	47	3	106	115	38	46

NA Not available.

[1]See table 1, footnote 5.

[2]See table 1, footnote 6.

[3]In general, companiee in the Crude petroleum end Natural gas industriee made only one report for all oil and gae field operations in each State. The only data by county which theae reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishmante represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. For North Dakote, 15 establiahment reports, principally for nonproducing establishments, did not show the county in which the operations were located. Contractors were requested to prepare one report for all oil and gas field contract aervicee performed in the United Stetes. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company wea also engaged in crude petroleum or natural gas production. The employee distribution for auch companies is included with the county dete for the Crude petroleum and Natural gas industries.

[4]See table 2, footnote 6.

[5]See table 2, footnote 10.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	South Dakota, total	Aurora	Beadle	Bon Homme	Brookings	Brown	Butte	Clark	Codington	Corson
All operations, total	191	1	2	2	1	2	5	1	3	2
Classified in mineral industries	187	1	2	2	1	2	4	1	3	2
Included in manufactures	4	...	...	...	...	...	1	...	...	...
Metal mining:										
Lode gold	6	...	...	...	...	...	...	...	...	...
Columbium ores	1	...	...	...	...	...	...	...	...	...
Metal mining contract services	2	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:										
Uranium-radium-vanadium ores	15	...	...	...	...	...	1	...	...	...
Metallic ores, n.e.c	19	...	...	...	...	...	...	...	...	...
Lignite	2	...	...	...	...	...	...	...	...	1
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[1]	21	...	...	...	...	...	...	...	...	1
Drilling oil and gas wells contract services[1]	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension granite:										
Classified in mineral industries	6	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	6	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...
Sandstone	4	...	...	...	...	...	...	...	...	...
Sand and gravel	60	1	2	2	1	2	1	1	3	...
Clay, ceramic, and refractory minerals:										
Bentonite	2	...	...	...	...	...	2	...	...	...
Feldspar	14	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	2	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	1	...	...	...
Natural abrasives, except sand, n.e.c	1	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	2	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	...	...	...	...	...	...
Mica	21	...	...	...	...	...	...	...	...	...

County	Custer	Davison	Day	Dewey	Douglas	Edmunds	Fall River	Grant	Gregory	Haakon
All operations, total	50	3	3	2	1	1	12	9	4	1
Classified in mineral industries	49	3	3	2	1	1	12	7	4	1
Included in manufactures	1	...	...	...	...	...	...	2	...	...
Metal mining:										
Lode gold	...	...	...	...	...	...	...	...	...	...
Columbium ores	1	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	2	...	...	...
Miscellaneous metal ores:										
Uranium-radium-vanadium ores	3	...	...	...	...	...	8	...	...	...
Metallic ores, n.e.c	12	...	...	...	...	...	...	...	...	...
Lignite	...	...	...	1	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[1]	...	...	...	...	...	...	...	...	...	...
Drilling oil and gas wells contract services[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension granite:										
Classified in mineral industries	...	...	...	...	...	...	...	5	...	...
Included in manufactures	...	...	...	...	...	...	...	2	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	1	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...
Sand and gravel	1	2	3	1	1	1	2	2	4	1
Clay, ceramic, and refractory minerals:										
Bentonite	...	...	...	...	...	...	...	...	...	...
Feldspar	10	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c	1	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	...	...	...	...	...	...	...	...
Mica	20	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Hamlin	Hanson	Harding	Hughes	Hutchinson	Jackson	Jerauld	Lake	Lawrence	Lincoln
All operations, total	1	2	1	2	1	1	1	2	9	2
Classified in mineral industries	1	2	1	2	1	1	1	2	9	2
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Metal mining:										
Lode gold	...	...	...	...	...	...	...	...	5	...
Columbium ores	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:										
Uranium-radium-vanadium ores	...	...	...	...	...	...	...	...	2	...
Metallic ores, n.e.c	...	...	...	...	...	...	...	...	...	...
Lignite	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[1]	...	...	1	1	...	...	...	...	1	...
Drilling oil and gas wells contract services[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension granite:										
Classified in mineral industries	...	...	...	1	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	...	...	...	...	...	...	...	1	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Sandstone	...	1	...	...	...	...	...	...	...	...
Sand and gravel	1	1	...	...	1	1	1	2	...	2
Clay, ceramic, and refractory minerals:										
Bentonite	...	...	...	...	...	...	...	...	...	...
Feldspar	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...
Mica	...	...	...	...	...	...	...	...	...	...

	Meade	Minnehaha	Moody	Pennington	Perkins	Roberts	Spink	Stanley	Turner	Walworth
All operations, total	1	7	3	27	2	1	1	1	3	1
Classified in mineral industries	1	7	3	27	2	1	1	1	3	1
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Metal mining:										
Lode gold	...	...	...	1	...	...	...	...	...	...
Columbium ores	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:										
Uranium-radium-vanadium ores	...	...	...	1	...	...	...	...	...	...
Metallic ores, n.e.c	...	...	...	7	...	...	...	...	...	...
Lignite	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:										
Crude petroleum and natural gas[1]	...	...	...	1	1	...	...	...	...	...
Drilling oil and gas wells contract services[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:										
Dimension granite:										
Classified in mineral industries	...	...	...	...	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Crushed and broken stone:										
Limestone:										
Classified in mineral industries	...	...	...	4	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Sandstone	...	2	...	...	...	...	...	1	...	...
Sand and gravel	1	5	3	4	1	1	1	...	3	1
Clay, ceramic, and refractory minerals:										
Bentonite	...	...	...	...	...	...	...	...	...	...
Feldspar	...	...	...	4	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:										
Classified in mineral industries	...	...	...	2	...	...	...	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	...	...	...	2	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...
Mica	...	...	...	1	...	...	...	...	...	...

NA Not available.
[1]See table 3, footnote 3.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
South Dakota, all mineral operations:												
Including operations classified in manufactures	191	76	50	26	14	18	5	1	...	...	1	...
Mineral industries only	187	76	48	26	14	18	3	1	...	...	1	...
Metal mining, total	43	23	14	3	1	...	...	1	...	...	1	...
Lode gold	6	...	4	...	...	...	...	1	...	...	1	...
Columbium ores	1	1	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	2	2	...	...	...	...	...	...	...	...	...	...
Miscellaneous metal ores:												
Uranium-radium-vanadium ores	15	4	8	2	1	...	...	...	...	...	...	...
Metallic ores, n.e.c	19	16	2	1	...	...	...	...	...	...	...	...
Lignite	2	...	1	...	1	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	23	16	2	3	...	2	...	...	...	...	...	...
Crude petroleum and natural gas	21	16	1	2	...	2	...	...	...	...	...	...
Drilling oil and gas wells contract services	2	...	1	1	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	123	37	33	20	12	16	5	...	...	...	...	...
Mineral industries only	119	37	31	20	12	16	3	...	...	...	...	...
Dimension granite:												
Classified in mineral industries	6	1	...	2	1	2	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	...	2	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	6	...	...	...	3	3	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Sandstone	4	...	1	...	...	3	...	...	...	...	...	...
Sand and gravel	60	16	23	9	6	4	2	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	2	...	...	...	...	1	1	...	...	...	...	...
Feldspar	14	11	1	...	...	2	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	2	...	...	1	1	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Natural abraaives, except sand, n.e.c.	1	1	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	2	...	...	...	1	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	1	...	...	...	...	...	...	...	...	...
Mica	21	8	5	8	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
South Dakota, total.....	2,497	22,343	2,845	1.14	127	2,277	720	632	6,399	1	89	4	6
Metal mining, total[2].....	1,594	[3]15,494	2,300	1.44	148	1,739	411	308	5,439	...	98	2	...
Lode gold.....	1,549	15,439	2,300	1.48	149	1,739	411	308	5,439	...	98	2	...
Uranium-radium-vanadium ores.	34	(NA)	...	...	...	...	...	...	...	...	...	...	...
Metallic ores, n.e.c.....	11	114	...	...	...	...	...	...	...	...	...	...	...
Lignite mining and crude petroleum and natural gas extraction.....	39	([4])	2	0.05	([4])	1	...	...	2	...	...	100	...
Nonmetallic minerals (except fuels) mining, total.....	864	8,001	543	0.63	68	537	309	324	958	4	51	13	32
Crushed and broken stone:													
Limestone.....	103	682	32	0.31	47	30	...	...	32	...	...	100	...
Sandstone.....	85	809	147	1.73	182	147	...	39	223	...	16	...	84
Feldspar.....	72	502	...	...	...	...	...	...	...	...	...	...	...
Other nonmetallic minerals (except fuels) mining.....	604	6,008	364	0.60	61	360	309	285	703	7	69	11	[5]13

NA Not available.
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]See table 2, footnote 1.
[3]See table 1, footnote 6.
[4]See table 2, footnote 6.
[5]Represents "not specified."

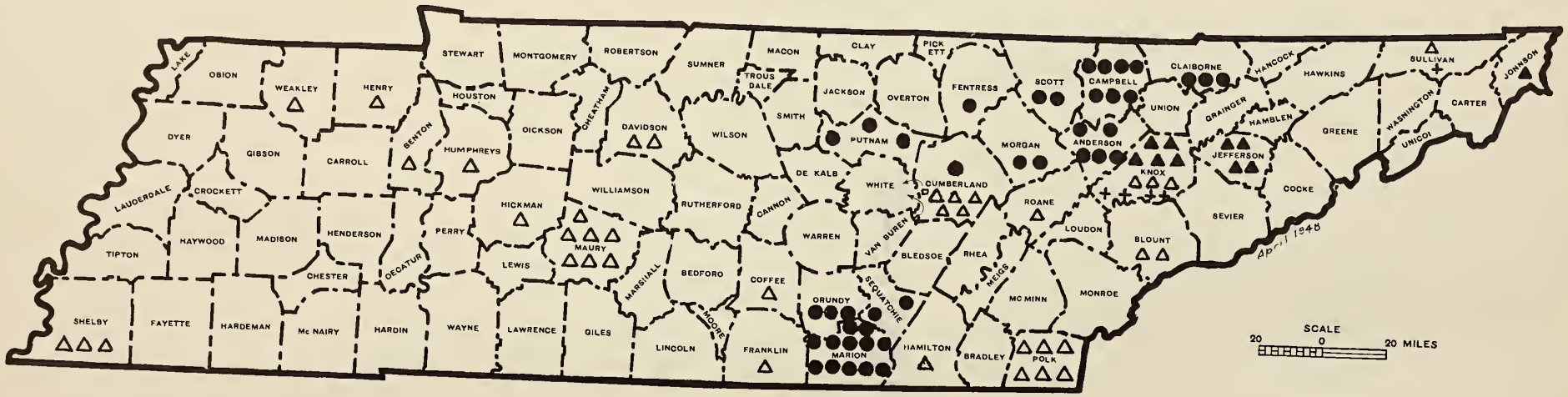
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TENNESSEE

141-1

MINING IN TENNESSEE: 1954

Rank among States:
Employment, 22
Value of shipments, 27



▲ METAL MINING
● COAL MINING
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$4,000
COAL MINING	5,000
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	8,100

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and quarries operated as part of cement and lime plants					
	1954	1939[1]	1929[4]	1954	1939[3]	1929[4]	1919[5]	1909	1902[6]
Number of operating companies	635	220	(NA)	589	[7]181	(NA)	(NA)	[7]221	[7]208
Number of establishments	692	(NA)	163	632	(NA)	138	203	246	(NA)
Number of mines and quarries	658	256	192	658	204	175	263	375	247
Number of oil and gas wells producing at end of year	44	41	(NA)	44	41	(NA)	14	1	6
Number of preparation plants	160	88	(NA)	127	67	(NA)	(NA)	(NA)	(NA)
Value of shipments[8] $1,000	88,267	22,684	24,186	78,379	20,344	21,582	23,292	12,693	9,534
Value added in mining ..... do	65,241	18,435	19,592	57,460	16,650	17,698	18,966	10,309	8,490
Number of persons engaged, total	10,880	12,578	12,902	9,797	11,672	12,164	15,450	17,347	11,668
Production and development workers	9,416	11,723	11,989	8,403	10,893	11,367	14,470	16,398	[9]10,895
All other employees	765	739	[10]862	709	675	[10]759	913	860	773
Proprietors and firm members	699	116	51	685	104	38	67	89	(NA)
Performing manual labor	504	69	(NA)	501	67	(NA)	17	24	(NA)
Man-hours worked by production and development workers 1,000	17,412	19,578	(NA)	15,131	(NA)	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total $1,000	56,608	16,194	17,510	50,967	14,791	15,795	18,951	10,754	6,574
Wages of production and development workers ..... do	28,044	10,459	10,977	24,741	9,760	10,218	12,987	7,378	4,866
Salaries of all other employees ..... do	3,993	1,486	[10]1,939	3,717	1,337	[10]1,693	1,638	992	664
Minerals received for preparation ..... do	1,236	(NA)	(NA)	1,236	(NA)	(NA)	...	42	(NA)
Supplies ..... do	[11]15,956	2,602	2,858	14,487	2,310	2,370	2,892	1,637	
Fuel[12] ..... do	[11]2,202	590	608	1,825	481	479	1,037	645	853
Purchased electric energy ..... do	[11]1,436	968	985	1,334	860	895	223		
Contract work ..... do	[11]3,741	89	143	3,627	43	140	174	60	191
Purchased machinery installed ..... do	[13]5,543		1,119	5,148		732	(NA)		
Capital expenditures, total ..... do	[13]7,088	(NA)	(NA)	6,738	(NA)	(NA)	(NA)		
Development and exploration of mineral property ..... do	[13]1,847		775	1,833		775	538	(NA)	(NA)
Preparation plant construction ..... do	[13]953	223		945	[14]134				
Other construction ..... do	[13]463		(NA)	436		(NA)	(NA)		
New machinery and equipment ..... do	[13]2,844	935		2,626	[14]702				
Used plant and equipment ..... do	[13]981	72		898	[14]57				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[13]363	137	87	328	[14]123	73	57	35	15
Per production worker	39	12	7	39	11	6	4	2	1
Prime movers 1,000	[13]208	42	30	182	[14]34	22	39	35	15
Electric motors driven by purchased energy ..... do	[13]155	95	57	146	[14]89	51	18	[15]	...
Horsepower rating of electric motors driven by energy generated at establishment ..... do	[13]3	4	3	3	[14]4	3	13	15	1
Energy used ..... million kwh equivalent	[13]1,122	1,421	1,681	958	[14]1,302	1,511	(NA)		
Coal[16] ..... 1,000 short tons	[13]23	159	205	18	[14]146	185	299		
Fuel oils ..... 1,000 barrels	[13]199	18	6	158	[14]14	[15]	1	(NA)	(NA)
Gas ..... million cu.ft	[13]679	4	...	613	4	...	1		
Electric energy purchased ..... million kwh	[13]177	142	89	167	[14]138	86	(NA)		
Electric energy generated and used ..... do	[13]4	3	8	4	[14]3	8	(NA)		

NA Not available.

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing marble and sandstone at such operations was $551,000; this value has been included in the value of shipments and value added in mining. Excludes data for one contract service operation and one nonproducing operation.

[2]Excludes data for crude petroleum and natural gas extraction and common clay and shale operations. The value of products of such operations in 1939 was $182,000.

[3]Includes data for one glass sand operation. See also footnote 1.

[4]Excludes data for crude petroleum and natural gas extraction operations. The products of such operations in 1939 were valued at $45,000. Includes data for 1 limestone quarry operated as part of a lime plant.

[5]Excludes data for one nonproducing establishment.

[6]Includes data for lime plants producing lime valued at $236,000.

[7]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[8]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[9]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[10]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[11]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[12]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[13]Excludes statistics for crushed stone and clay operations classified in manufactures.

[14]Includes data for limestone quarries operated as part of cement and lime plants.

[15]Represents less than one-half of the unit of measure specified.

[16]Includes data for fuels produced and used in the same establishment.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Tennessee, total		Metal mining			Bituminous coal mining	Crude petroleum and natural gas extraction	Nonmetallic minerals (except fuels) mining (total)	
		Including operations in manufactures	Mineral industries only	Total	Manganese ores	Other metal mining			Including operations classified in manufactures	Mineral industries only
1	Number of operating companies	635	620	16	9	7	408	24	188	173
2	Number of establishments	692	665	21	9	12	412	24	235	208
	Number of mines, quarries, and producing oil and gas wells:									
3	1954	702	677	19	8	11	411	44	228	203
4	1939	297	(NA)	9	1	8	123	41	124	(NA)
5	Number of preparation plants	160	158	13	9	4	7	xxx	140	138
	Value of shipments:[1]									
6	1954 ..... $1,000	88,267	82,815	5,874	1,011	4,863	26,551	120	55,722	50,270
7	1939[2] ..... do	22,684	(NA)	3,342	(NA)	(NA)	10,104	45	9,193	(NA)
8	Value added in mining ..... do	65,241	61,108	3,630	794	2,836	20,892	15	40,704	36,571
9	Number of persons engaged, total	10,880	10,275	936	164	772	4,645	45	5,254	4,649
10	Production and development workers	9,416	8,839	784	151	633	3,969	23	4,640	4,063
11	All other employees	765	737	134	1	133	173	1	457	429
12	Proprietors and firm members	699	699	18	12	6	503	21	157	157
13	Performing manual labor	504	504	11	7	4	422	11	60	60
	Man-hours worked by production and development workers:									
14	1954 1,000	17,412	16,291	1,385	299	1,086	6,339	37	9,651	8,530
15	1939[2] ..... do	19,578	(NA)	2,153	(NA)	(NA)	10,213	44	7,168	(NA)
	At mines:									
16	Underground ..... do	6,557	6,557	624	...	624	4,964	xxx	969	969
17	Open-pit ..... do	5,007	4,285	151	141	10	613	xxx	4,243	3,521
18	Surface (mine shops, yards, etc.) ..... do	[9]1,542	[9]1,542	273	10	263	762	xxx	507	507
19	At preparation plants ..... do	[9]4,269	[9]3,870	337	148	189		xxx	3,932	3,533
20	At oil and gas field operations ..... do	37	37	xxx	xxx	xxx	xxx	37	xxx	xxx
21	Man-hours spent on development and exploration work (included above) ..... do	1,172	1,172	95	3	92	26	17	1,034	1,034
22	Principal expenses designated below, total $1,000	56,608	53,452	7,016	663	6,353	18,877	157	30,558	27,402
23	Wages of production and development workers ..... do	28,044	26,368	2,389	395	2,695	12,232	45	13,378	11,702
24	Salaries of all other employees ..... do	3,993	3,828	701			928	5	2,359	2,194
25	Minerals received for preparation ..... do	1,236	1,045	829	60	769	186	xxx	221	30
26	Supplies ..... do	[5]15,956	14,883	922	78	844	4,181	31	[5]10,822	9,749
	Purchased fuel:									
27	Coal ..... do	[5]157	153	7	...	7	1	...	[5]149	145
28	Fuel oil ..... do	[5]980	978	49	26	23	263	2	[5]666	664
29	Gas ..... do	[5]193	193	...	...	...	...	...	[5]193	193
30	Other fuels ..... do	[5]872	868	32	29	3	160	7	[5]673	669
31	Purchased electric energy ..... do	[5]1,436	1,400	233	34	199	319	6	[5]878	842
32	Contract work ..... do	[5]3,741	3,736	1,854	41	1,813	607	61	[5]1,219	1,214
33	Purchased machinery installed ..... do	[6]5,543	5,511	1,044	216	828	1,159	3	[6]3,337	3,305
34	Capital expenditures, total ..... do	[6]7,088	7,060	2,726	267	2,459	1,217	5	[6]3,140	3,112
35	Development and exploration of mineral property ..... do	[6]1,847	1,847	1,642	3	1,639	131	...	[6]74	74
36	Preparation plant construction ..... do	[6]953	953	253	56	197	17	xxx	[6]683	683
37	Other construction ..... do	[6]463	463	346	32	314	27	...	[6]90	90
38	New machinery and equipment ..... do	[6]2,844	2,828	394	163	231	660	2	[6]1,788	1,772
39	Used plant and equipment ..... do	[6]981	969	91	13	78	382	3	[6]505	493
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[6]363	360	32	6	26	81	(7)	[6]250	247
41	Per production worker	39	41	41	40	41	20	xxx	54	61
42	Prime movers 1,000	[6]208	207	9	5	4	52	...	[6]147	146
43	Electric motors driven by purchased energy ..... do	[6]155	153	23	1	22	29	(7)	[6]103	101
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	[6]3	3	...	...	...	1	...	[6]2	2
45	Energy used ..... million kwh equivalent	[6]1,122	1,116	63	18	45	173	4	[6]882	876
46	Coal ..... 1,000 short tons	[6 8]23	[8]23	1	...	1	[8]1	...	[6]21	21
47	Fuel oil ..... 1,000 barrels	[6]199	199	9	5	4	54	(7)	[6]136	136
48	Gas ..... million cu. ft.	[6]679	679	...	...	...	...	...	[6]679	679
49	Electric energy purchased ..... million kwh	[6]177	175	33	3	30	32	1	[6]111	109
50	Electric energy generated and used ..... do	[6]4	4	...	(7)	...	1	...	[6]3	3
51	Water intake, including mine water used ..... million gallons	[6]17,020	16,888	1,241	444	797	30	1	[6]15,748	15,616
52	Per production worker ..... do	1.81	1.91	1.58	2.94	1.26	0.01	0.04	3.39	3.84

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. xxx Not applicable. [1]See table 1, footnote 8. [2]See table 1, footnote 1. [3]Figures for "Other stone" are included with those for "Clay, ceramic, and refractory minerals and Other nonmetallic minerals (except fuels) mining." [4]Includes man-hours worked on floating equipment. [5]See table 1, footnote 11. [6]See table 1, footnote 13. [7]Less than one-half of the unit of measure specified. [8]Includes one thousand tons of coal produced and used for fuel at the same establishment. [9]For Bituminous coal, man-hours at "Preparation plant" are included with man-hours for "Surface". Less than 10 percent of the coal shipped was mechanically cleaned.

AND INDUSTRY: 1954 AND SELECTED COMPARATIVE STATISTICS: 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining--Continued													
Dimension stone				Crushed and broken stone			Sand and gravel		Clay, ceramic, and refractory minerals and Other nonmetallic minerals (except fuels) mining				
All stone		Marble (including operations in manufactures)	Sandstone (including operations in manufactures)	Limestone		Other stone	Common sand and gravel	Foundry sand	Total		Kaolin and ball clay (mineral industries only)	Phosphate rock	
Including operations in manufactures	Mineral industries only			Including operations in manufactures	Mineral industries only				Including operations in manufactures	Mineral industries only			
40	38	8	26	63	57	7	26	6	55	42	5	27	1
47	44	14	26	84	76	7	28	7	62	46	8	28	2
47	44	14	26	83	75	5	28	7	58	42	9	28	3
16	(NA)	12	4	37	24	1	20	3	47	(NA)	8	14	4
3	1	1	2	73	73	6	26	7	25	25	5	15	5
5,093	3,421	3,078	1,984	15,687	12,657	353	5,478	634	28,477	27,727	2,458	14,502	6
1,672	(NA)	1,593	79	1,243	546	(3)	1,419	87	34,772	(NA)	424	3,753	7
3,849	2,779	2,238	1,586	11,055	8,657	227	4,284	447	20,842	20,177	1,783	9,605	8
1,068	765	547	501	1,538	1,305	70	699	76	1,803	1,734	201	816	9
977	702	510	459	1,343	1,110	63	640	66	1,551	1,482	178	685	10
47	19	36	11	133	133	2	51	5	219	219	23	106	11
44	44	1	31	62	62	5	8	5	33	33	...	25	12
19	19	...	12	20	20	1	1	1	18	18	...	15	13
1,786	1,269	964	809	2,947	2,481	110	1,551	117	3,140	3,002	381	1,410	14
21,606	(NA)	21,545	261	1,133	(NA)	(3)	876	49	33,504	(NA)	224	2,730	15
...	...	...	...	160	160	...	...	...	809	809	...	...	16
1,289	1,171	577	699	1,406	940	59	4628	18	843	705	181	444	17
96	96	...	96	104	104	...	(NA)	(NA)	307	307	95	187	18
401	2	387	14	1,277	1,277	51	923	99	1,181	1,181	105	779	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
779	779	...	779	8	8	...	1	7	239	239	48	21	21
3,579	2,159	2,225	1,336	8,526	7,070	249	3,549	333	14,322	14,042	1,234	7,601	22
2,065	1,408	1,170	884	3,873	3,049	109	2,143	127	5,061	4,866	445	2,066	23
289	124	228	61	618	618	11	257	19	1,165	1,165	135	512	24
191	...	723	...	...	...	29	...	...		6,204	...	...	25
868	512		333		2,215	73	693	53			411	3,675	26
5	1	5	...		21	...	34	...		89	...	88	27
10	8	...	10	4,035	199	1	200	30	8,096	226	94	92	28
...	...	...	...		...	...	13	...		180	...	180	29
51	47	12	36		383	14	86	11		128	16	96	30
91	55	87	4		319	4	91	11		362	32	172	31
9	4	...	8		266	8	32	82		822	101	720	32
233	201	44	189		1,953	6	383	12		750	89	502	33
214	186	31	182		1,356	9	338	12		1,211	68	628	34
10	10	...	9		...	...	12	2		50	43	4	35
4	4	...	4		98	3	8	...		570	5	191	36
4	4	4	...		52	...	27	...		7	...	3	37
163	147	12	151		921	...	208	10		486	20	340	38
33	21	15	18		285	6	83	...		98	...	90	39
14	11	8	6		100	3	30	5		98	8	66	40
14	16	17	13		90	48	47	75		66	46	96	41
8	7	2	6	(NA)	69	3	23	3	(NA)	41	7	29	42
6	4	6	...		31	...	7	2		57	1	37	43
(7)	(7)	(7)	...		2	...	...	...		...	...	...	44
21	19	9	12		215	4	149	14		479	43	382	45
(7)	(7)	(7)	...		3	...	5	...		13	...	13	46
2	2	...	2		41	...	35	6		52	20	24	47
...	...	...	...		...	...	66	...		613	...	613	48
6	4	6	(7)		26	(7)	9	1		69	4	28	49
...	...	...	...		3	...	...	...		...	...	...	50
148	16	(D)	...		4,388	...	4,220	160		6,832	43	5,601	51
0.15	0.02	(D)	...		3.95	...	6.59	2.42		4.61	0.24	8.18	52

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Tennessee, all mineral operations:									
Including operations in manufactures	692	88,267	65,241	9,416	765	17,412	28,044	3,993	[2]6,107
Mineral industries only:									
Including crude petroleum and natural gas extraction	665	82,815	61,108	8,839	737	16,291	26,368	3,828	6,091
Excluding crude petroleum and natural gas extraction	641	82,695	61,093	8,816	736	16,254	26,323	3,823	6,089
Metal mining, total	21	5,874	3,630	784	134	1,385	2,389	701	2,635
Manganese ores	9	1,011	794	151	1	299	393	2	254
Other metal mining	12	4,863	2,836	633	133	1,086	1,996	699	2,381
Bituminous coal	412	26,551	20,892	3,969	173	6,339	12,232	928	835
Crude petroleum and natural gas extraction[3]	24	120	15	23	1	37	45	5	2
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	235	55,722	40,704	4,640	457	9,651	13,378	2,359	[2]2,635
Mineral industries only	208	50,270	36,571	4,063	429	8,530	11,702	2,194	2,619
Dimension stone:									
Including operations in manufactures	47	5,093	3,849	977	47	1,786	2,065	289	181
Mineral industries only	44	3,421	2,779	702	19	1,269	1,408	124	165
Crushed and broken stone:									
Including operations in manufactures	91	16,040	11,282	1,406	135	3,057	3,982	629	(NA)
Mineral industries only	83	13,010	8,884	1,173	135	2,591	3,158	629	1,074
Sand and gravel	35	6,112	4,731	706	56	1,668	2,270	276	267
Clay, ceramic, and refractory minerals and Other industries:									
Including operations in manufactures	62	28,477	20,842	1,551	219	3,140	5,061	1,165	(NA)
Mineral industries only	46	27,727	20,177	1,482	219	3,002	4,866	1,165	1,113
COUNTY									
Anderson	17	2,122	1,823	438	13	519	1,273	71	20
Benton	7	683	503	64	5	114	143	19	8
Blount	9	975	742	193	10	350	445	74	39
Bradley	3	143	108	15	1	34	46	6	1
Campbell (bituminous coal only)	44	4,208	3,264	715	27	1,156	2,471	115	26
Claiborne	14	1,505	1,197	246	9	362	744	25	88
Cumberland (mineral industries only)	41	2,263	1,852	518	12	881	1,006	68	144
Bituminous coal	13	377	300	62	...	80	122	...	...
Nonmetallic minerals (except fuels) mining only	28	1,876	1,544	455	12	800	883	68	144
Davidson:									
Including operations in manufactures	11	2,128	1,646	276	36	664	810	173	[2]155
Mineral industries only	7	1,603	1,173	233	36	578	682	173	155
Fentress	28	(NA)	(NA)	102	8	(NA)	(NA)	(NA)	(NA)
Bituminous coal	21	249	187	61	1	82	105	1	5
Franklin (mineral industries only)	5	490	327	55	15	129	156	55	54
Giles (nonmetallic minerals (except fuels) mining only)	6	712	509	42	3	100	133	5	20
Grundy	24	2,023	1,477	300	44	495	977	222	35
Hamilton (including operations in manufactures), total	22	2,434	1,931	157	17	341	554	157	[2]192
Bituminous coal	14	302	219	40	...	73	99	...	...
Nonmetallic minerals (except fuels) mining (including operations in manufactures)	8	2,132	1,712	117	17	268	455	157	[2]192
Henry (mineral industries only)	5	1,365	974	119	16	260	297	92	78
Hickman	5	547	371	60	3	127	204	20	220
Jefferson	9	1,839	1,482	352	55	553	1,037	309	2,373
Johnson	6	877	682	153	5	282	351	15	241
Knox:									
Including operations in manufactures	20	8,766	5,581	925	162	1,929	2,796	897	[2]224
Mineral industries only	14	6,170	3,712	562	137	1,235	1,803	742	224
Marion (bituminous coal only)	155	7,159	5,729	1,139	21	1,894	3,146	114	212
Maury (nonmetallic minerals (except fuels) mining only)	16	13,360	8,875	596	101	1,240	1,816	544	344

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Morgan (mineral industries only):									
Including crude petroleum and natural gas	24	(NA)	(NA)	[4]257	([4])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	21	2,082	1,676	237	14	375	837	75	129
Bituminous coal	17	1,999	1,611	208	14	327	793	75	117
Overton	10	163	127	39	...	49	62	...	4
Perry	5	564	275	46	3	89	80	6	52
Putnam (bituminous coal only)	4	3,143	2,622	257	15	520	1,206	107	97
Rhea	11	262	167	41	1	64	86	2	...
Bituminous coal	8	196	125	26	...	38	53	...	...
Roane	5	648	423	58	4	133	183	15	2
Scott (bituminous coal only)	26	1,964	1,299	200	9	383	683	38	167
Sequatchie (bituminous coal only)	27	824	670	176	...	279	369	...	26
Shelby (mineral industries only)	7	1,952	1,675	241	19	531	888	72	28
Sullivan (including operations in manufactures)	7	1,106	790	101	3	205	302	12	[2]56
Van Buren (bituminous coal only)	8	110	91	29	...	38	42	...	...
Weakley	5	1,484	1,111	97	10	197	233	56	26
White	6	303	230	33	1	57	67	8	...

D Withheld to avoid approximately disclosing figures for individual companies.

NA Not available.

[1]See table 1, footnote 8.

[2]See table 1, footnote 13.

[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.

[4]Figures for "All other employees" are included with those for "Production and development workers."

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	All mineral operations			Metal mining				Bituminous coal mining		Crude petroleum and natural gas extraction[1]	
	Total	Classified in mineral industries	Included in manufactures	Iron ores	Lead and zinc ores (valued chiefly for zinc)	Manganese ores	Metal mining contract services	Bituminous coal	Bituminous coal mining contract services	Crude petroleum and natural gas	Drilling oil and gas wells contract services
Tennessee, total..	692	665	27	2	9	9	1	409	3	18	6
Anderson	17	17	...	...	...	...	...	17	...	...	
Bedford	1	1	...	...	...	...	...	...	...	...	
Benton	7	7	...	...	...	...	...	...	...	...	
Bledsoe	4	4	...	...	...	...	...	4	...	...	
Blount	9	9	...	...	...	...	...	...	...	...	
Bradley	3	3	...	...	...	...	...	...	...	...	
Campbell	46	46	...	...	...	...	...	44	1	...	
Cannon	1	1	...	...	...	...	...	...	...	...	
Carroll	1	1	...	...	...	...	...	...	...	...	
Carter	3	3	...	...	...	...	...	...	...	...	
Claiborne	14	14	...	...	...	...	...	14	...	...	
Cocke	1	1	...	...	...	...	...	...	...	...	
Coffee	5	5	...	...	...	...	...	...	...	...	
Cumberland	42	41	1	...	...	...	...	13	...	...	
Davidson	11	7	4	...	...	...	...	...	...	...	
Decatur	2	2	...	...	...	...	...	...	...	...	
De Kalb	1	1	...	...	...	...	...	...	...	...	
Dickson	1	1	...	...	...	...	...	...	...	...	
Fentress	28	28	...	...	...	...	...	21	...	3	
Franklin	7	5	2	...	...	...	...	...	...	...	
Giles	6	6	...	...	...	...	...	...	...	...	
Grainger	1	1	...	...	...	...	...	...	...	...	
Greene	1	1	...	...	...	...	...	...	...	...	
Grundy	24	24	...	...	...	...	...	24	...	...	
Hamilton	22	18	4	...	...	...	...	14	...	...	
Hardeman	1	1	...	...	...	...	...	...	...	...	
Hawkins	1	1	...	...	...	...	...	...	...	...	
Henderson	1	1	...	...	...	...	...	...	...	...	
Henry	6	5	1	...	...	...	...	...	...	...	
Hickman	5	5	...	...	...	...	...	...	...	...	
Humphreys	2	2	...	...	...	...	...	...	...	...	
Jefferson	9	9	...	...	7	1	1	...	...	...	
Johnson	6	6	...	...	...	5	...	...	...	...	
Knox	20	14	6	...	2	...	...	...	...	...	
Lauderdale	1	1	...	...	...	...	...	...	...	...	
Lincoln	2	2	...	...	...	...	...	...	...	...	
Loudon	3	3	...	...	...	...	...	...	...	...	(NA)
McMinn	1	1	...	...	...	...	...	...	...	...	
McNairy	1	1	...	...	...	...	...	...	...	...	
Macon	1	1	...	...	...	...	...	...	...	...	
Marion	157	156	1	...	...	...	...	155	1	...	
Marshall	1	1	...	...	...	...	...	...	...	...	
Maury	16	16	...	...	...	...	...	...	...	...	
Meigs	2	2	...	...	...	...	...	...	...	...	
Monroe	3	3	...	1	...	1	...	...	...	...	
Montgomery	2	2	...	...	...	...	...	...	...	...	
Morgan	25	24	1	...	...	...	...	17	...	3	
Overton	10	10	...	...	...	...	...	8	...	...	
Perry	5	5	...	...	...	...	...	...	...	...	
Pickett	2	2	...	...	...	...	...	...	...	2	
Polk	2	2	...	...	...	...	...	...	...	...	
Putnam	5	5	...	...	...	...	...	4	...	...	
Rhea	11	11	...	...	...	...	...	8	...	...	
Roane	5	5	...	1	...	...	...	1	...	...	
Robertson	2	2	...	...	...	...	...	...	...	1	
Rutherford	1	1	...	...	...	...	...	...	...	...	
Scott	28	28	...	...	...	...	...	26	1	1	
Sequatchie	28	28	...	...	...	...	...	27	...	...	
Sevier	2	2	...	...	...	...	...	...	...	1	
Shelby	8	7	1	...	...	...	...	...	...	...	
Smith	1	1	...	...	...	...	...	...	...	...	
Stewart	1	1	...	...	...	...	...	...	...	...	
Sullivan	7	4	3	...	...	...	...	...	...	...	
Sumner	2	2	...	...	...	...	...	...	...	...	
Tipton	2	2	...	...	...	...	...	...	...	...	
Unicoi	3	3	...	...	...	1	...	...	...	...	
Union	2	2	...	...	...	1	...	...	...	...	
Van Buren	9	9	...	...	...	...	...	8	...	...	
Warren	1	1	...	...	...	...	...	...	...	...	
Washington	3	...	3	...	...	...	...	...	...	...	
Wayne	1	1	...	...	...	...	...	...	...	...	
Weakley	5	5	...	...	...	...	...	...	...	...	
White	6	6	...	...	...	...	...	4	...	...	
Williamson	1	1	...	...	...	...	...	...	...	...	
Wilson	1	1	...	...	...	...	...	...	...	...	

See footnote at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nonmetallic minerals (except fuels) mining											
	Dimension stone						Crushed and broken stone					
		Sandstone		Marble			Limestone					
	Limestone	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Stone, n.e.c.	Classified in mineral industries	Included in manufactures	Granite	Marble	Sandstone	Stone, n.e.c.
Tennessee, total..	4	13	1	24	2	3	76	8	1	2	1	3
Anderson	...	...	...	...	...	...	...	...	...	...	...	...
Bedford	...	...	...	...	...	...	1	...	...	...	...	...
Benton	...	...	...	...	...	...	...	...	...	...	...	...
Bledsoe	...	...	...	...	...	..	...	...	...	...	...	...
Blount	...	7	...	...	...	...	1	...	...	1	...	...
Bradley	...	...	...	...	...	...	2	...	...	...	...	...
Campbell	...	...	...	...	...	...	1	...	...	...	...	...
Cannon	...		...	...	...	...	1	...	...	...	...	...
Carroll	...	...	...	...	...	...	...	...	...	...	...	...
Carter	...	...	...	...	...	...	1	...	1	...	...	...
Claiborne	...	...	...	...	...	...	...	...	...	...	...	...
Cocke	...	...	...	...	...	...	1	...	...	...	...	...
Coffee	...	...	...	...	...	...	5	...	...	...	...	...
Cumberland	2	1	...	21	1	2	...	...	...	...	1	...
Davidson	...	...	...	...	...	...	4	1	...	...	...	...
Decatur	...	...	...	...	...	...	1	...	...	...	...	...
De Kalb	...	...	...	...	...	...	1	...	...	...	...	...
Dickson	...	...	...	...	...	...	1	...	...	...	...	...
Fentress	...	...	...	2	...	...	2	...	...	...	...	...
Franklin	...	...	...	...	...	...	2	1	...	...	...	...
Giles	...	...	...	...	...	...	1	...	...	...	...	...
Grainger	...	1	...	...	...	...	...	...	...	...	...	...
Greene	...	...	...	...	...	...	1	...	...	...	...	...
Grundy	...	...	...	...	...	...	...	...	...	...	...	...
Hamilton	1	...	...	...	...	...	2	1	...	...	...	...
Hardeman	...	...	...	...	...	...	...	...	...	...	...	...
Hawkins	...	...	...	...	...	...	1	...	...	..	...	...
Henderson	...	...	...	...	...	...	...	...	...	...	...	...
Henry	...	...	...	...	...	...	...	...	...	...	...	...
Hickman	...	...	...	...	...	...	...	...	...	...	...	...
Humphreys	...	...	...	...	...	...	1	...	...	...	...	...
Jefferson	...	...	...	...	...	...	...	...	...	...	...	...
Johnson	...	...	...	...	...	...	1	...	...	...	...	...
Knox	...	3	1	...	...	...	6	3	...	1	...	...
Lauderdale	...	...	...	...	...	...	1	...	...	...	...	...
Lincoln	...	...	...	...	...	...	2	...	...	...	...	...
Loudon	...	...	...	...	...	...	1	...	...	...	...	...
McMinn	...	...	...	...	...	...	1	...	...	...	...	...
McNairy	...	...	...	...	...	...	...	...	...	...	...	...
Macon	...	...	...	...	...	...	1	...	...	...	...	...
Marion	...	...	...	...	...	...	1	1	...	...	...	...
Marshall	...	...	...	...	...	...	1	...	...	...	...	...
Maury	...	...	...	...	...	...	1	...	...	...	...	...
Meigs	...	...	...	...	...	...	2	...	...	...	...	...
Monroe	...	...	...	...	...	...	...	...	...	...	...	...
Montgomery	...	...	...	...	...	...	2	...	...	...	...	...
Morgan	...	...	...	1	1	...	...	...	...	...	...	2
Overton	...	...	...	...	...	...	2	...	...	...	...	...
Perry	...	...	...	...	...	...	1	...	...	...	...	...
Pickett	...	...	...	...	...	...	...	...	...	...	...	...
Polk	...	...	...	...	...	...	1	...	...	...	...	...
Putnam	...	...	...	...	...	...	1	...	...	...	...	...
Rhea	...	...	...	...	...	...	2	...	...	...	...	...
Roane	...	...	...	...	...	1	2	...	...	...	...	1
Robertson	...	...	...	...	...	...	1	...	...	...	...	...
Rutherford	...	...	...	...	...	...	1	...	...	...	...	...
Scott	...	...	...	...	...	...	...	...	...	...	...	...
Sequatchie	...	...	...	...	...	...	1	...	...	...	...	...
Sevier	...	...	...	...	...	...	1	...	...	...	...	...
Shelby	...	...	...	...	...	...	...	...	...	...	...	...
Smith	...	...	...	...	...	...	1	...	...	...	...	...
Stewart	1	...	...	...	...	...	...	...	...	...	...	...
Sullivan	...	...	...	...	...	...	3	1	...	...	...	...
Sumner	...	...	...	...	...	...	2	...	...	...	...	...
Tipton	...	...	...	...	...	...	...	...	...	...	...	...
Unicoi	...	...	...	...	...	...	1	...	...	...	...	...
Union	...	1	...	...	...	...	...	...	...	...	...	...
Van Buren	...	...	...	...	...	...	1	...	...	...	...	...
Warren	...	...	...	...	...	...	1	...	...	...	...	...
Washington	...	...	...	...	...	...	...	...	...	...	...	...
Wayne	...	...	...	...	...	...	...	...	...	...	...	...
Weakley	...	...	...	...	...	...	...	...	...	...	...	...
White	...	...	...	...	...	...	2	...	...	...	...	...
Williamson	...	...	...	...	...	...	1	...	...	...	...	...
Wilson	...	...	...	...	...	...	1	...	...	...	...	...

See footnote at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nonmetallic minerals (except fuels) mining—Continued										
	Sand and gravel		Clay, ceramic, and refractory minerals					Chemical and fertilizer mineral mining			Nonmetallic minerals (except fuels) mining contract services
				Kaolin and ball clay		Clay, ceramic, and refractory minerals, n.e.c.					
	Common sand and gravel	Foundry sand	Fuller's earth	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Barite	Phosphate rock	Chemical and fertilizer mineral mining, n.e.c.	
Tennessee, total..	28	7	2	8	1	2	15	2	28	1	3
Anderson	...	...	...	...	...	...	...	...	...	...	...
Bedford	...	...	...	...	...	...	...	...	...	...	...
Benton	2	5	...	...	...	...	...	...	...	...	...
Bledsoe	...	...	...	...	...	...	...	...	...	...	...
Blount	...	...	...	...	...	...	...	...	...	...	...
Bradley	1	...	...	...	...	...	...	...	...	...	...
Campbell	...	...	...	...	...	...	...	...	...	...	...
Cannon	...	...	...	...	...	...	...	...	...	...	...
Carroll	...	...	...	1	...	...	...	...	...	...	...
Carter	...	1	...	...	...	...	...	...	...	...	...
Claiborne	...	...	...	...	...	...	...	...	...	...	...
Cocke	...	...	...	...	...	...	...	...	...	...	...
Coffee	...	...	...	...	...	...	...	...	...	...	...
Cumberland	...	...	...	...	...	...	...	...	...	...	...
Davidson	2	...	...	...	...	...	3	...	1	...	...
Decatur	1	...	...	...	...	...	...	...	...	...	...
De Kalb	...	...	...	...	...	...	...	...	...	...	...
Dickson	...	...	...	...	...	...	...	...	...	...	...
Fentress	...	...	...	...	...	...	...	...	...	...	...
Franklin	3	...	...	...	...	...	1	...	...	...	...
Giles	...	...	...	...	...	...	...	...	5	...	...
Grainger	...	...	...	...	...	...	...	...	...	...	...
Greene	...	...	...	...	...	...	...	...	...	...	...
Grundy	...	...	...	...	...	...	...	...	...	...	...
Hamilton	1	...	...	...	...	...	3	...	...	...	...
Hardeman	1	...	...	...	...	...	...	...	...	...	...
Hawkins	...	...	...	...	...	...	...	...	...	...	...
Henderson	...	1	...	...	...	...	...	...	...	...	...
Henry	...	...	2	2	1	...	...	...	...	...	1
Hickman	...	...	...	...	...	...	...	...	5	...	...
Humphreys	1	...	...	...	...	...	...	...	...	...	...
Jefferson	...	...	...	...	...	...	...	...	...	...	...
Knox	2	...	...	...	...	...	2	...	...	...	...
Lauderdale	...	...	...	...	...	...	...	...	...	...	...
Lincoln	...	...	...	...	...	...	...	...	...	...	...
Loudon	1	...	...	...	...	...	...	1	...	...	...
McMinn	...	...	...	...	...	...	...	...	...	...	...
McNairy	1	...	...	...	...	...	...	...	...	...	...
Macon	...	...	...	...	...	...	...	...	...	...	...
Marion	...	...	...	...	...	...	...	...	...	...	...
Marshall	...	...	...	...	...	...	...	...	...	...	...
Maury	...	...	...	...	...	...	...	...	14	...	1
Meigs	...	...	...	...	...	...	...	...	...	...	...
Monroe	...	...	...	...	...	...	...	1	...	...	...
Montgomery	...	...	...	...	...	...	...	...	...	...	...
Morgan	...	...	...	...	...	1	...	...	...	...	...
Overton	...	...	...	...	...	...	...	...	...	...	...
Perry	...	...	...	...	...	...	...	...	3	...	1
Pickett	...	...	...	...	...	...	...	...	...	...	...
Polk	...	...	...	...	...	...	...	...	...	1	...
Putnam	...	...	...	...	...	...	...	...	...	...	...
Rhea	...	...	...	...	...	1	...	...	...	...	...
Roane	...	...	...	...	...	...	...	...	...	...	...
Robertson	...	...	...	...	...	...	...	...	...	...	...
Rutherford	...	...	...	...	...	...	...	...	...	...	...
Scott	...	...	...	...	...	...	...	...	...	...	...
Sequatchie	...	...	...	...	...	...	...	...	...	...	...
Sevier	...	...	...	...	...	...	...	...	...	...	...
Shelby	7	...	...	...	...	...	1	...	...	...	...
Smith	...	...	...	...	...	...	...	...	...	...	...
Stewart	...	...	...	...	...	...	...	...	...	...	...
Sullivan	1	...	...	...	...	...	2	...	...	...	...
Sumner	...	...	...	...	...	...	...	...	...	...	...
Tipton	2	...	...	...	...	...	...	...	...	...	...
Unicoi	1	...	...	...	...	...	...	...	...	...	...
Union	...	...	...	...	...	...	...	...	...	...	...
Van Buren	...	...	...	...	...	...	...	...	...	...	...
Warren	...	...	...	...	...	...	...	...	...	...	...
Washington	...	...	...	...	...	...	3	...	...	...	...
Wayne	1	...	...	...	...	...	...	...	...	...	...
Weakley	...	...	...	5	...	...	...	...	...	...	...
White	...	...	...	...	...	...	...	...	...	...	...
Williamson	...	...	...	...	...	...	...	...	...	...	...
Wilson	...	...	...	...	...	...	...	...	...	...	...

[1]See table 3, footnote 3.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Tennessee, all mineral operations:												
Including operations classified in manufactures	692	59	268	144	109	76	19	13	3	1	...	...
Mineral industries only	665	58	257	140	105	71	18	13	2	1	...	...
Metal mining, total	21	3	4	3	2	6	1	...	2	...	...	...
Iron ores	2	...	1	1	...	...	...	...	...	...	...	...
Lead and zinc ores (valued chiefly for zinc)	9	2	2	...	...	3	...	...	2	...	...	...
Manganese ores	9	1	1	2	2	3	...	...	...	...	...	...
Metal mining contract services	1	...	...	...	...	...	1	...	...	...	...	...
Bituminous coal mining, total	412	29	206	96	50	16	8	7	...	...	...	...
Bituminous coal	409	29	203	96	50	16	8	7	...	...	...	...
Bituminous coal mining contract services	3	...	3	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	24	14	9	1	...	...	...	...	...	...	...	...
Crude petroleum and natural gas	18	13	4	1	...	...	...	...	...	...	...	...
Drilling oil and gas wells contract services	6	1	5	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	235	13	49	44	57	54	10	6	1	1	...	...
Including operations classified in manufactures	27	1	11	4	4	5	1	...	1	...	...	...
Mineral industries only	208	12	38	40	53	49	9	6	...	1	...	...
Dimension stone:												
Limestone	4	1	3	...	...	...	...	...	...	...	...	...
Marble:												
Classified in mineral industries	13	...	...	3	3	7	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	...	1	...	...	...
Sandstone:												
Classified in mineral industries	24	2	10	6	2	1	1	2	...	...	...	...
Included in manufactures	2	...	...	1	1	...	...	...	...	...	...	...
Stone, n.e.c	3	1	2	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	76	3	8	17	26	20	2	...	...	...	...	...
Included in manufactures	8	...	...	...	3	4	1	...	...	...	...	...
Granite	1	...	...	1	...	...	...	...	...	...	...	...
Marble	2	...	...	1	1	...	...	...	...	...	...	...
Sandstone	1	...	...	...	...	1	...	...	...	...	...	...
Stone, n.e.c	3	...	1	1	1	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	28	...	5	2	10	7	3	1	...	...	...	...
Foundry sand	7	...	2	1	3	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fuller's earth	2	...	...	...	...	2	...	...	...	...	...	...
Kaolin and ball clay:												
Classified in mineral industries	8	...	1	...	2	4	1	...	...	...	...	...
Included in manufactures	1	1	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	2	1	...	1	...	...	...	...	...	...	...	...
Included in manufactures	15	...	11	3	...	1	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Barite	2	...	...	...	1	1	...	...	...	...	...	...
Phosphate rock	28	3	5	7	3	5	2	3	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c	1	...	...	...	...	...	...	...	...	1	...	...
Nonmetallic minerals (except fuels) contract services	3	1	1	...	1	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Tennessee, total	8,839	61,108	15,371	1.74	252	13,923	1,517	3,547	20,125	1	60	28	11
Metal mining, total	784	3,630	1,009	1.29	278	994	232	2,457	1,614	14	84	...	2
Manganese ores	151	794	444	2.94	559	429	...	...	771	32	63	...	5
Other metal mining	633	2,836	565	0.89	199	565	232	2,457	843	1	99	...	...
Bituminous coal mining	3,969	20,892	28	0.01	1	17	2	58	91	...	40	39	[2]21
Crude petroleum and natural gas extraction	23	15	1	0.04	67	...	xxx	xxx	1	...	100	...	...
Nonmetallic minerals (except fuels) mining, total	4,063	36,571	14,333	3.53	392	12,912	1,283	1,032	18,419	([3])	58	30	12
Dimension stone	702	2,779	5	0.01	2	5	11	150	16	...	20	80	...
Crushed and broken stone:													
Limestone	1,110	8,657	3,794	3.42	438	3,791	594	591	4,388	...	...	99	[2]1
Other stones	63	227	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel:													
Common sand and gravel	640	4,284	4,134	6.46	965	3,966	86	50	5,635	...	78	12	[2]10
Foundry sand	66	447	160	2.42	358	4	...	...	250	...	...	...	100
Kaolin and ball clay	178	1,783	43	0.24	24	43	...	...	43	...	...	100	...
Chemical and fertilizer mineral mining (phosphate rock)	685	9,605	5,009	7.31	521	4,865	592	...	6,877	...	99	...	1
Other industries	619	8,789	1,188	1.92	135	238	...	241	1,210	([3])	13	2	85

[1]For computations of water intake, including mine water used, see table 2.
[2]Represents "not specified."
[3]Less than 0.5 percent.

TEXAS

142-1

MINING IN TEXAS: 1954

Rank among States:
Employment, 1
Value of Shipments, 1



Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries and common clay and shale		
	1954	1939[1]	1919[2]	1909[2]	1902[3]	1954	1939[4]	1929[5]
Number of operating companies	4,966	3,377	(NA)	[6]258	[6]359	254	[6]147	(NA)
Number of establishments	5,345	(NA)	688	260	(NA)	309	(NA)	133
Number of mines and quarries	343	196	81	97	169	293	164	159
Number of oil and gas wells producing at end of year	146,657	89,568	8,749	2,279	866	xxx	xxx	xxx
Number of preparation plants	437	285	(NA)	(NA)	(NA)	194	284	(NA)
Value of shipments[7]...$1,000	4,323,776	641,380	160,378	10,742	6,982	155,258	34,638	49,758
Value added in mining...do	3,542,874	521,232	80,525	8,422	4,245	125,942	29,693	38,884
Number of persons engaged, total	146,933	70,077	23,222	7,182	5,147	8,021	5,380	7,379
Production and development workers	101,642	53,329	18,343	6,458	[8]3,901	6,758	4,745	6,544
All other employees	39,351	14,345	4,385	440	1,246	965	579	[9]789
Proprietors and firm members	5,940	2,403	494	284	(NA)	298	56	46
Performing manual labor	2,364	411	58	68	(NA)	203	17	(NA)
Man-hours worked by production and development workers...1,000	223,497	96,255	(NA)	(NA)	(NA)	15,360	9,588	(NA)
Principal expenses designated below, total...$1,000	1,946,411	237,723	116,436	6,924	5,748	59,802	11,381	20,679
Wages of production and development workers...do	426,368	78,249	29,924	4,054	2,309	25,171	4,908	7,609
Salaries of all other employees...do	242,765	39,326	6,659	550	702	4,991	1,528	[9]2,196
Minerals received for preparation...do	617,637	(NA)	361	[10]35	(NA)	18,053	(NA)	(NA)
Supplies...do		32,096	46,561	1,852			2,950	5,475
Fuel[11]...do	46,370	8,472	6,223	277	1,103	6,106	1,470	4,979
Purchased electric energy...do	13,169	2,240	96			1,084	355	369
Contract work...do	600,102	77,340	26,612	156	1,634	4,397	170	51
Purchased machinery installed...do	363,859		(NA)			9,914		2,532
Capital expenditures, total...do	860,235	(NA)	(NA)			10,238	(NA)	(NA)
Development and exploration of mineral property...do	446,953		74,575	(NA)	(NA)	294		545
Preparation plant construction...do	23,913	4 078				540	70	
Other construction...do	37,213	(NA)				1,320		(NA)
New machinery and equipment...do	319,179	82,496				7,524	406	
Used plant and equipment...do	32,996	4,722				579	168	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	9,009	1,722	131	33	13	427	113	83
Per production worker	89	31	7	5	3	64	24	13
Prime movers...1,000	8,454	1,569	128	33	12	360	83	62
Electric motors driven by purchased energy...do	555	153	3	...	1	67	30	21
Horsepower rating of electric motors driven by energy generated at establishment...do	210	58	5	([12])	([12])	23	17	18
Energy used...million kwh equivalent	138,726	63,451	(NA)			10,733	3,992	25,120
Coal...1,000 short tons	1	14	68			...	14	55
Fuel oils[13]...1,000 barrels	1,343	434	2,900			219	77	294
Gas[13]...million cu.ft	415,614	201,619	10,775	(NA)	(NA)	33,215	11,797	23,258
Electric energy purchased...million kwh	754	195	(NA)			98	124	17,009
Electric energy generated and used...do	867	97	(NA)			45	24	19,402

xxx Not applicable. NA Not available. [1]Except for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing limestone and granite at such operations was $21,000; this value has been included in the value of shipments and value added in mining. [2]Excludes data for sand, gravel, common clay, and shale operations and limestone quarries operated as part of cement and lime plants. There were 102 such mines and quarries in 1939 with products valued at $3,963,000 For 1919, excludes 1 nonproducing coal mining establishment. [3]Includes data for 2 cement plants and lime plants producing lime valued at $82,000. [4]Excludes data for 4 nonproducing mines. See also footnote 1. [5]Excludes data for common clay and shale operations. There were 32 such mines in 1939 with products valued at $256,000. Also, excludes 1 nonproducing establishment. [6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry. [7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for perparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication. [8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period. [9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments. [10]Represents gas purchased for resale. [11]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat. [12]Less than one-half of unit of measure specified. [13]Includes data for fuels produced and used at the same establishment for power or heat, including residue gas at natural gas liquids plants.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Texas, total		Metal mining and Lignite mining			Crude petroleum and natural gas extraction	
		Including operations classified in manufactures	Mineral industries only	Total	Iron ores	Other industries	Total	Crude petroleum
1	Number of operating companies	4,966	4,908	12	4	10	4,681	2,649
2	Number of establishments	5,345	5,264	13	5	8	4,986	2,682
	Number of mines, quarries, and producing oil and gas wells:							
3	1954	147,000	146,971	10	5	5	146,657	139,508
4	1939	89,764	(NA)	19	1	18	89,568	(NA)
5	Number of preparation plants	437	430	4	4	...	239	xxx
	Value of shipments:[2]							
6	1954 ..... $1,000	4,323,776	4,311,283	10,082	6,318	3,764	4,165,854	2,842,323
7	1939 ..... do	641,380	(NA)	1,907	(NA)	(NA)	606,486	[3]492,199
8	Value added in mining ..... do	3,542,874	3,533,064	8,723	5,138	3,585	[6]3,415,084	2,486,440
9	Number of persons engaged, total	146,933	145,740	565	341	224	138,593	64,544
10	Production and development workers	101,642	100,455	443	312	131	94,485	34,442
11	All other employees	39,351	39,347	112	28	84	38,470	26,855
12	Proprietors and firm members	5,940	5,938	10	1	9	5,638	3,247
13	Performing manual labor	2,364	2,362	4	1	3	2,158	1,050
	Man-hours worked by production and development workers:							
14	1954 1,000	223,497	221,216	947	664	283	207,496	69,798
15	1939 ..... do	[7]96,255	(NA)	[8]2,325	(NA)	(NA)	86,428	[3]55,808
	At mines:							
16	Underground ..... do	46	46	2	...	2	xxx	xxx
17	Open-pit ..... do	5,753	3,903	279	57	222	xxx	xxx
18	Surface (mine shops, yards, etc.) ..... do	1,976	1,976	331	272	59	xxx	xxx
19	At preparation plants ..... do	19,640	19,209	335	335	...	14,049	xxx
20	At well operations ..... do	196,082	196,082	xxx	xxx	xxx	193,447	69,798
21	Man-hours spent on development and exploration work (included above) ..... do	82,137	82,137	3	...	3	82,084	16,974
22	Principal expenses designated below, total $1,000	1,946,417	1,940,612	4,194	2,755	1,439	[6]1,884,927	1,106,010
23	Wages of production and development workers ..... do	426,368	423,213	1,959	1,301	658	400,380	151,232
24	Salaries of all other employees ..... do	242,765	242,740	658	178	480	237,745	165,041
25	Minerals received for preparation ..... do	[10]617,637	615,095	...	...	...	[10]598,963	xxx
26	Supplies ..... do			765	561	204		237,477
	Purchased fuel:							
27	Coal ..... do	[10]9	9	...	...	...	7	
28	Fuel oil ..... do	[10]5,287	5,284	39	20	19	4,468	1,004
29	Gas ..... do	[10]10,970	10,970	103	101	2	6,652	2,537
30	Other fuels ..... do	[10]30,110	30,082	91	57	34	28,999	6,463
31	Purchased electric energy ..... do	[10]13,169	13,127	168	134	34	12,070	9,421
32	Contract work ..... do	[10]600,102	600,092	411	403	8	595,643	532,835
33	Purchased machinery installed ..... do	[11]363,859	363,822	561	181	380	353,935	230,851
34	Capital expenditures, total ..... do	[11]860,235	860,217	779	277	502	849,967	664,705
35	Development and exploration of mineral property ..... do	[11]446,954	[11]446,934	118	97	21	446,647	418,450
36	Preparation plant construction ..... do	[11]23,913	23,913	...	...	...	23,365	xxx
37	Other construction ..... do	37,213	37,213	132	9	123	35,893	30,152
38	New machinery and equipment ..... do	[11]319,179	319,164	518	165	353	311,645	203,360
39	Used plant and equipment ..... do	[11]32,996	32,993	11	6	5	32,417	12,743
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[11]9,009	9,003	62	32	30	8,580	2,891
41	Per production worker	89	90	140	102	229	91	84
42	Prime movers 1,000	[11]8,454	8,452	53	23	30	8,093	2,488
43	Electric motors driven by purchased energy ..... do	[11]555	551	9	9	...	487	403
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	[11]210	210	...	...	...	187	29
45	Energy used ..... million kwh equivalent	[11]138,726	138,715	314	283	31	127,751	47,009
	Produced and used for fuel:							
46	Crude petroleum ..... 1,000 barrels	54	54	xxx	xxx	xxx	54	54
47	Natural gas ..... million cu.ft	320,391	320,391	xxx	xxx	xxx	320,391	116,657
	Purchased fuels:							
48	Coal ..... 1,000 short tons	[11]1	1	...	...	...	1	...
49	Fuel oil ..... 1,000 barrels	1,289	1,288	7	3	4	1,127	373
50	Gas ..... million cu.ft	[11]95,223	95,223	820	814	6	61,589	26,257
51	Electric energy purchased ..... million kwh	[11]1,046	1,043	27	14	13	948	689
52	Electric energy generated and used ..... do	[11]736	736	...	...	...	691	44
53	Water intake, including mine water used ..... million gallons	81,777	81,677	6,327	6,327	...	54,147	27,004
54	Per production worker ..... do	0.80	0.81	14.28	20.28	...	0.57	0.78

See footnotes at end of table.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction—Continued						Nonmetallic minerals (except fuels) mining					
	Natural gas liquids		Oil and gas field contract services			Total		Dimension stone			
								All stone		Limestone (including operations classified in manufactures)	
Natural gas	Natural gasoline	Cycle condensate	Drilling oil and gas wells	Building, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures	Mineral industries only		
144	90	24	888	48	978	273	215	13	6	8	1
155	204	27	889	48	981	346	265	13	6	8	2
5,150	xxx	xxx	1,923	...	76	333	252	13	6	8	3
(NA)	xxx	xxx	(NA)	(NA)	(NA)	177	(NA)	10	(NA)	3	4
xxx	211	28	xxx	xxx	xxx	194	187	7	...	5	5
148,485	272,742	73,629	385,178	4,963	438,534	147,840	135,347	1,801	103	839	6
(3)	[4]28,252	([4])	52,069	2,381	31,585	32,987	(NA)	77	(NA)	34	7
136,715	([6])	([6])	240,625	4,058	329,881	119,067	109,257	1,474	76	676	8
1,987	7,531	1,499	27,005	878	35,149	7,775	6,582	318	31	178	9
1,221	5,539	1,194	23,657	807	27,625	6,714	5,527	302	24	171	10
638	1,958	303	2,300	22	6,394	769	765	9	2	5	11
128	34	2	1,048	49	1,130	292	290	7	5	2	12
57	8	...	491	22	530	94	92	2	...	...	13
2,807	11,541	2,508	51,857	714	68,271	15,054	12,773	643	34	337	14
(3)	[4]5,838	([4])	14,719	842	9,221	[7]7,502	(NA)	77	(NA)	[7]34	15
xxx	xxx	xxx	xxx	xxx	xxx	44	44	...	...		16
xxx	xxx	xxx	xxx	xxx	xxx	5,474	3,624	211	33	156	17
xxx	xxx	xxx	xxx	xxx	xxx	1,645	1,645	1	1	1	18
xxx	11,541	2,508	xxx	xxx	xxx	5,256	4,825	431	...	180	19
2,807	xxx	xxx	51,857	714	68,271	2,635	2,635	xxx	xxx	xxx	20
723	xxx	xxx	48,521	534	15,332	50	50	...	...	...	21
42,742	[6]118,300	[6]12,241	280,992	3,373	263,287	57,290	51,491	1,149	75	569	22
5,589	25,953	5,719	102,224	2,287	107,376	24,029	20,874	812	44	394	23
3,700	10,248	1,876	15,660	121	41,099	4,362	4,337	29	4	21	24
xxx	[6]67,805	([6])	xxx	xxx	xxx	51	51	...	...	...	25
12,688		4,012	127,329	680	90,990	[10]17,858	15,316	215	11	93	26
...	...	...	...	5	2	[10]4	4	...	...	...	27
44	5	([12])	3,091	14	310	[10]780	777	9	6	...	28
59	1,144	...	2,595	...	317	[10]4,215	4,215	...	...	...	29
220	(D)	13	8,980	134	13,070	[10]1,020	992	26	4	23	30
107	1,707	19	110	1	705	[10]931	889	42	...	22	31
20,335	11,319	602	21,003	131	9,418	[10]4,048	4,038	16	6	16	32
5,932	32,962	1,058	43,444	107	39,581	[11]9,363	9,326	41	4	23	33
27,615	47,870	1,871	61,999	167	45,740	[11]9,489	9,471	22	4	14	34
16,614	...	...	11,512	...	71	[11]189	169	...	...	...	35
xxx	22,828	537	xxx	xxx	xxx	[11]548	548	...	...	...	36
2,632	...	...	829	53	2,227	[11]1,188	1,188	...	...	...	37
7,334	22,871	1,325	34,516	74	42,165	[11]7,016	7,001	19	4	11	38
1,035	2,171	9	15,142	40	1,277	[11]568	565	3	...	3	39
114	1,288	222	1,769	17	2,279	[11]367	361	8	2	5	40
93	233	186	75	21	82	56	65	26	83	29	41
107	1,235	221	1,761	17	2,264	[11]308	306	4	2	3	42
7	53	1	8	...	15	[11]59	55	4	...	2	43
...	102	27	25	...	4	[11]23	23			...	44
2,211	51,379	13,413	9,402	40	4,297	[11]10,661	10,650	14	3	7	45
...	xxx	xxx	...	...	...	xxx	xxx	xxx	xxx	xxx	46
6,371	153,783	43,580	...	...	...	xxx	xxx	xxx	xxx	xxx	47
...			...	1	([12])	([12])	([12])	...	...	...	48
10	1	([12])	685	3	55	[11]155	154	2	1	...	49
563	12,503	...	19,438	...	2,828	[11]32,814	32,814	...	...	...	50
5	181	1	7	([12])	65	[11]71	68	3	...	1	51
...	462	126	54	...	5	[11]45	45	...	...	...	52
81	18,724	3,568	4,426	1	343	[11]21,303	21,203	17	1	3	53
0.07	3.38	2.99	0.19	([13])	0.01	3.08	3.67	0.06	0.04	0.02	54

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Nonmetallic minerals (except fuels) mining—Continued					
		Crushed and broken stone			Sand and gravel		
		Total		Limestone (mineral industries only)	Common sand and gravel	Glass sand	Foundry sand
		Including operations classified in manufactures	Mineral industries only				
1	Number of operating companies	47	26	19	122	5	6
2	Number of establishments	50	29	22	153	5	6
	Number of mines, quarries, and producing oil and gas wells:						
3	1954	50	29	22	152	5	6
4	1939	31	19	12	54	2	2
5	Number of preparation plants	27	27	20	123	3	6
	Value of shipments:[2]						
6	1954 ..... $1,000	15,638	9,483	8,399	25,057	576	206
7	1939 ..... do	1,356	943	777	3,216	[5]78	([5])
8	Value added in mining ..... do	10,761	6,062	5,428	17,394	463	145
9	Number of persons engaged, total	1,153	794	707	2,496	65	44
10	Production and development workers	1,061	702	625	2,185	57	33
11	All other employees	71	71	68	172	5	1
12	Proprietors and firm members	21	21	14	139	3	10
13	Performing manual labor	9	9	4	71	1	3
	Man-hours worked by production and development workers:						
14	1954 1,000	2,380	1,662	1,502	5,708	135	72
15	1939 ..... do	1,144	(NA)	(NA)	2,063	[5]69	([5])
	At mines:						
16	Underground ..... do	...	...	...	...	...	...
17	Open-pit ..... do	1,210	492	462	[9]2,671	34	38
18	Surface (mine shops, yards, etc.) ..... do	257	257	238	xxx	xxx	xxx
19	At preparation plants ..... do	913	913	802	3,037	101	34
20	At well operations ..... do	xxx	xxx	xxx	xxx	xxx	xxx
21	Man-hours spent on development and exploration work (included above) ..... do	10	10	7	24	...	1
22	Principal expenses designated below, total $1,000	8,817	6,140	5,294	14,659	293	132
23	Wages of production and development workers ..... do	3,515	2,294	2,041	7,115	163	74
24	Salaries of all other employees ..... do	345	345	332	799	20	2
25	Minerals received for preparation ..... do	...	...	...	(NA)	(NA)	(NA)
26	Supplies ..... do	4,957	2,645	2,284	3,488	62	33
	Purchased fuel:						
27	Coal ..... do		...	...	4	...	...
28	Fuel oil ..... do		105	96	533	5	5
29	Gas ..... do		77	77	44	...	1
30	Other fuels ..... do		137	127	621	27	13
31	Purchased electric energy ..... do		197	164	462	12	3
32	Contract work ..... do		340	173	1,593	4	1
33	Purchased machinery installed ..... do		814	672	3,910	31	30
34	Capital expenditures, total ..... do		894	622	2,992	28	25
35	Development and exploration of mineral property ..... do		49	15	80	3	...
36	Preparation plant construction ..... do		169	45	326	4	...
37	Other construction ..... do		25	3	49	5	...
38	New machinery and equipment ..... do		646	554	1,980	16	21
39	Used plant and equipment ..... do		5	5	557	...	4
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	(NA)	53	47	166	3	4
41	Per production worker		75	76	76	58	128
42	Prime movers 1,000		37	33	140	2	4
43	Electric motors driven by purchased energy ..... do		16	14	26	1	([5])
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do		...	...	([2])	...	([2])
45	Energy used ..... million kwh equivalent		151	141	502	9	4
	Produced and used for fuel:						
46	Crude petroleum ..... 1,000 barrels	xxx	xxx	xxx	xxx	xxx	xxx
47	Natural gas ..... million cu.ft	xxx	xxx	xxx	xxx	xxx	xxx
48	Purchased fuels:						
48	Coal ..... 1,000 short tons		...	...	([12])	...	...
49	Fuel oil ..... 1,000 barrels		28	25	124	1	([12])
50	Gas ..... million cu.ft		169	169	335	...	4
51	Electric energy purchased ..... million kwh		17	15	32	1	([12])
52	Electric energy generated and used ..... do	(NA)	2	2			
53	Water intake, including mine water used ..... million gallons		161	161	7,268	125	182
54	Per production worker ..... do		0.26	0.26	3.33	2.19	5.52

NA Not available. xxx Not applicable. [1]Includes data for 6 kaolin or ball clay mines. No such mines were reported for 1954. [2]See table 1, footnote 7. [3]Figures for the Natural gas industry are included with those for the Crude petroleum industry. See also footnote 8. [4]Figures for the Cycle condensate industry are included with those for the Natural gasoline industry. See also footnote 8. [5]Figures for the Foundry sand industry are included with those for the Glass sand industry. [6]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued									
Clay, ceramic, and refractory minerals									
Total									
Including operations classified in manufactures	Mineral industries only	Bentonite	Fire clay (including operations classified in manufactures)	Fuller's earth	Clay, ceramic, and refractory minerals, n.e.c. (including operations classified in manufactures)	Chemical and fertilizer mineral mining	Nonmetallic minerals (except fuels) contract services	Natural abrasives, except sand, and Miscellaneous nonmetallic minerals (except fuels)(including operations classified in manufactures)	
61	24	5	11	4	39	14	7	16	1
78	29	7	14	4	50	18	7	16	2
78	29	7	14	4	50	13	xxx	16	3
[1]55	(NA)	4	3	10	32	12	xxx	11	4
18	12	4	...	4	4	7	...	9	5
6,104	3,094	1,866	969	138	2,664	93,442	429	4,587	6
[11]1,295	(NA)	171	45	723	256	26,233	116	616	7
4,374	2,029	1,175	773	115	1,848	80,733	354	3,369	8
530	195	92	101	13	319	2,534	74	561	9
499	164	80	98	10	308	2,093	66	418	10
18	18	10	...	1	7	440	1	52	11
13	13	2	3	2	4	1	7	91	12
5	5	...	...	...	3	...	2	1	13
1,042	372	188	191	17	641	4,228	125	721	14
[1]842	(NA)	154	31	353	239	[8]2,905	101	301	15
...	...	...	...	...	...	44	...	...	16
779	109	19	191	5	559	17	125	389	17
...	...	...	...	...	...	1,368	...	19	18
263	263	169	...	12	82	164	...	313	19
xxx	xxx	xxx	xxx	xxx	xxx	2,635	xxx	xxx	20
4	4	...	...	...	4	7	...	...	21
3,114	1,613	940	426	55	1,682	26,476	228	2,422	22
1,309	473	218	237	30	817	9,953	153	1,262	23
70	70	39	...	2	29	2,770			24
22	22	22	...	...	...	25	...		25
	499	340		19		7,956	44		26
						...	...		27
1,713	4	...	189	2	836	37	(D)	1,160	28
	141	9		2		3,997	...		29
	34	19		...		103	(D)		30
	46	31		...		107	31		31
	324	262		...		1,528	...		32
	122	105		...		4,132	15		33
	127	97		...		5,176	15		34
	12	...		...		37	...		35
	16	8		...		18	...		36
	...	...		...		1,297	...		37
	76	66		...		3,823	15		38
	23	23		...		1			39
(NA)			(NA)		(NA)			(NA)	
	7	3		...		108	3		40
	43	36		...		52	38		41
	5	2		...		102	3		42
	2	1		...		6	...		43
	...	...		...		23	...		44
	252	21		6		9,677	8		45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
	...	...		...		...	...		48
	2	...		1		9	(D)		49
	762	46		14		31,284	...		50
	6	2		...		10	[12]		51
(NA)	...	...	(NA)	...	(NA)	42	...	(NA)	52
	11	1		...		12,358	...		53
	0.07	0.01		...		5.90	...		54

in the costs shown for the Natural gas liquids industries and no value added figure is shown for these industries. [7]See table 1, footnote 1. [8]Figures for the Crude petroleum and Natural gas industries include data for the following nonproducing operations in other industries: 2 mercury mines; 2 natural gasoline plants; and 2 sulfur mines. [9]Includes man-hours worked on floating equipment. [10]Figures for fuels, electric energy, and contract work for crushed stone, clay, and gypsum operations classified in manufactures are included with figures for supplies. [11]Excludes figures for crushed stone, clay, and gypsum operations classified in manufactures. [12]Less than one-half of the unit of measure specified. [13]Less than 0.005.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Texas:									
Including operations in manufactures	5,345	4,323,776	3,542,874	101,642	39,351	223,497	426,368	242,765	[2]827,239
Mineral industries only:									
Including crude petroleum and natural gas extraction	5,264	4,311,283	3,533,064	100,455	39,347	221,216	423,213	242,740	827,224
Excluding crude petroleum and natural gas extraction	278	145,429	117,980	5,970	877	13,720	22,833	4,995	9,674
Metal mining and Lignite, total	13	10,082	8,723	443	112	947	1,959	658	768
Iron ores	5	6,318	5,138	312	28	664	1,301	178	271
Other industries	8	3,764	3,585	131	84	283	658	480	497
Crude petroleum and natural gas extraction, total	4,986	4,165,854	[3]3,415,084	94,485	38,470	207,496	400,380	237,745	817,550
Crude petroleum and natural gas[4]	2,837	2,990,808	2,623,155	35,663	27,493	72,605	156,821	168,741	678,542
Natural gas liquids	231	346,371	([3])	6,733	2,261	14,049	31,672	12,124	47,561
Oil and gas field contract services[5]	1,918	828,675	574,564	52,089	8,716	120,842	211,887	56,880	91,447
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	346	147,840	119,067	6,714	769	15,054	24,029	4,362	8,921
Mineral industries only	265	135,347	109,257	5,527	765	12,773	20,874	4,337	8,906
Dimension stone:									
Including operations in manufactures	13	1,801	1,474	302	9	643	812	29	19
Mineral industries only	6	103	76	24	2	34	44	4	4
Crushed and broken stone:									
Including operations in manufactures	50	15,638	10,761	1,061	71	2,380	3,515	345	(NA)
Mineral industries only	29	9,483	6,062	702	71	1,662	2,294	345	889
Sand and gravel	164	25,839	18,002	2,275	178	5,915	7,352	821	2,484
Clay, ceramic, and refractory minerals:									
Including operations in manufactures	78	6,104	4,374	499	18	1,042	1,309	70	(NA)
Mineral industries only	29	3,094	2,029	164	18	372	473	70	104
Chemical and fertilizer minerals mining	18	93,442	80,733	2,093	440	4,228	9,953	2,770	5,175
Nonmetallic minerals (except fuels) contract services	7	429	354	66	1	125	(D)	(D)	(D)
Natural abrasives, except sand and Miscellaneous nonmetallic minerals (except fuels) (including operations in manufactures)	16	4,587	3,369	418	52	721	(D)	(D)	(NA)
COUNTY									
Anderson	36	(NA)	(NA)	[6]232	([6])	(NA)	(NA)	(NA)	(NA)
Andrews	119	(NA)	(NA)	[6]1,150	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	112			[6]910	([6])				
Natural gas liquids	7	6,977	6,548	197	43	406	942	230	2,014
Angelina	5	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)
Aransas	27	(NA)	(NA)	[6]144	([6])	(NA)	(NA)	(NA)	(NA)
Archer	233	(NA)	(NA)	[6]795	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	230	(NA)	(NA)	[6]735	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	3	1,400	1,333	54	6	119	250	31	35
Atascosa, total	54	(NA)	(NA)	[6]270	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	51	(NA)	(NA)	(NA)	[6]193	([6])	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	3	740	595	66	11	146	229	71	37
Austin	16	(NA)	(NA)	[6]130	([6])	(NA)	(NA)	(NA)	(NA)
Bastrop (mineral industries only)	9	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)
Baylor	21	(NA)	(NA)	[6]82	([6])	(NA)	(NA)	(NA)	(NA)
Bee	63	(NA)	(NA)	[6]464	([6])	(NA)	(NA)	(NA)	(NA)
Bexar, total:									
Including operations in manufactures	77	(NA)	(NA)	[6]801	([6])	(NA)	(NA)	(NA)	(NA)
Mineral industries only	73	(NA)	(NA)	[6]761	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Bexar—Continued									
Crude petroleum and natural gas[7]	58	(NA)	(NA)	[6]595	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (mineral industries only)	15	2,249	1,591	134	32	305	382	147	426
Borden	42	(NA)	(NA)	[6]102	([6])	(NA)	(NA)	(NA)	(NA)
Bowie (including operations in manufactures)	3	(NA)	(NA)	[6]87	([6])	(NA)	(NA)	(NA)	(NA)
Brazoria, total	85	(NA)	(NA)	[6]1,688	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	78	(NA)	(NA)	[6]749	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	4	13,636	13,029	212	37	414	1,057	219	1,128
Nonmetallic minerals (except fuels) mining	3	8,839	6,342	564	126	1,115	2,379	667	191
Brooks	20	(NA)	(NA)	[6]227	([6])	(NA)	(NA)	(NA)	(NA)
Brown (mineral industries only)	69	(NA)	(NA)	[6]200	([6])	(NA)	(NA)	(NA)	(NA)
Burnet (mineral industries only)	5	162	285	39	6	71	114	35	128
Caldwell	56	(NA)	(NA)	[6]401	([6])	(NA)	(NA)	(NA)	(NA)
Calhoun	22	(NA)	(NA)	[6]96	([6])	(NA)	(NA)	(NA)	(NA)
Callahan	65	(NA)	(NA)	[6]135	([6])	(NA)	(NA)	(NA)	(NA)
Cameron	4	(NA)	(NA)	[6]10	([6])	(NA)	(NA)	(NA)	(NA)
Camp	12	(NA)	(NA)	[6]20	([6])	(NA)	(NA)	(NA)	(NA)
Carson	50	(NA)	(NA)	[6]418	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	47	(NA)	(NA)	[6]156	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	3	(D)	(D)	211	51	(D)	(D)	(D)	(D)
Cass	19	(NA)	(NA)	[6]146	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	16	(NA)	(NA)	[6]83	([6])	(NA)	(NA)	(NA)	(NA)
Chambers	36	(NA)	(NA)	[6]575	([6])	(NA)	(NA)	(NA)	(NA)
Cherokee	10	(NA)	(NA)	[6]57	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	7	(NA)	(NA)	[6]16	([6])	(NA)	(NA)	(NA)	(NA)
Clay	91	(NA)	(NA)	[6]313	([6])	(NA)	(NA)	(NA)	(NA)
Cochran	61	(NA)	(NA)	[6]346	([6])	(NA)	(NA)	(NA)	(NA)
Coke	36	(NA)	(NA)	[6]229	([6])	(NA)	(NA)	(NA)	(NA)
Coleman (including operations in manufactures)	112	(NA)	(NA)	[6]445	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	106	(NA)	(NA)	[6]361	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	3	205	139	12	3	26	47	12	403
Nonmetallic industries (except fuels) mining (including operations in manufactures)	3	576	438	69	(NA)	184	219	(NA)	(NA)
Colorado (mineral industries only), total	32	(NA)	(NA)	[6]589	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	22	(NA)	(NA)	[6]91	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	3	8,556	8,357	90	22	188	445	121	187
Sand and gravel	7	4,436	3,581	383	3	1,101	1,454	15	282
Comal (mineral industries only)	3	1,760	996	151	16	398	501	83	47
Comanche	11	(NA)	(NA)	[6]16	([6])	(NA)	(NA)	(NA)	(NA)
Concho	5	(NA)	(NA)	[6]56	([6])	(NA)	(NA)	(NA)	(NA)
Cooke	75	(NA)	(NA)	[6]408	([6])	(NA)	(NA)	(NA)	(NA)
Crane	69	(NA)	(NA)	832	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	66	(NA)	(NA)	[6]741	([6])	(NA)	(NA)	(NA)	(NA)
Crockett	70	(NA)	(NA)	[6]367	([6])	(NA)	(NA)	(NA)	(NA)
Crosby	3	(NA)	(NA)	[6]13	([6])	(NA)	(NA)	(NA)	(NA)
Dallas, total:									
Including operations in manufactures	108	(NA)	(NA)	[6]4,283	([6])	(NA)	(NA)	(NA)	(NA)
Mineral industries only	100	(NA)	(NA)	[6]4,183	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and Natural gas[7]	76	(NA)	(NA)	[6]3,750	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	32	7,636	5,107	478	55	1,180	1,641	279	[2]362
Mineral industries only	24	5,404	3,268	380	53	969	1,242	272	357
Dawson	34	(NA)	(NA)	[6]117	([6])	(NA)	(NA)	(NA)	(NA)
Denton (mineral industries only), total	20	(NA)	(NA)	[6]65	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Denton (mineral industries only)--Con.									
Crude petroleum and natural gas[7]..	16	(NA)	(NA)	[6]27	([6])	(NA)	(NA)	(NA)	(NA)
Sand and gravel	4	491	341	[6]38	([6])	90	[6]100	([6])	96
De Witt	38	(NA)	(NA)	[6]113	([6])	(NA)	(NA)	(NA)	(NA)
Dickens	3	(NA)	(NA)	[6]14	([6])	(NA)	(NA)	(NA)	(NA)
Dimit	4	(NA)	(NA)	[6]32	([6])	(NA)	(NA)	(NA)	(NA)
Duval	113	(NA)	(NA)	[6]744	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	109	(NA)	(NA)	[6]667	([6])	(NA)	(NA)	(NA)	(NA)
Eastland (mineral industries only)	68	(NA)	(NA)	[6]377	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	57	(NA)	(NA)	[6]198	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	7	2,346	1,209	140	12	299	504	50	40
Ector, total	124	(NA)	(NA)	[6]2,671	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	117	(NA)	(NA)	[6]2,007	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Chemical and fertilizer mineral mining, n.e.c	7	10,805	9,902	287	377	577	1,403	1,865	2,581
Edwards	3	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)
Ellis (including operations in manufactures)	5	(NA)	(NA)	[6]18	([6])	(NA)	(NA)	(NA)	(NA)
El Paso:									
Including operations in manufactures.	10	2,297	1,684	137	104	293	453	380	[2]112
Mineral industries only	6	1,777	1,245	97	104	213	307	380	112
Fayette, total	13	(NA)	(NA)	[6]134	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	7	(NA)	(NA)	[6]30	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	6	1,416	1,082	97	7	231	306	29	84
Fisher	46	(NA)	(NA)	[6]201	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	1	78	47	2	1	6	14	4	769
Foard	5	(NA)	(NA)	[6]15	([6])	(NA)	(NA)	(NA)	(NA)
Fort Bend, total	59	(NA)	(NA)	[6]1,005	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	56			[6]565	([6])				
Mineral industries only	3	(D)	(D)	381	59	(D)	(D)	(D)	(D)
Franklin	14	(NA)	(NA)	[6]84	([6])	(NA)	(NA)	(NA)	(NA)
Freestone	12	(NA)	(NA)	[6]34	([6])	(NA)	(NA)	(NA)	(NA)
Frio	34	(NA)	(NA)	[6]186	([6])	(NA)	(NA)	(NA)	(NA)
Gaines, total	73	(NA)	(NA)	[6]448	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	69	(NA)	(NA)	[6]403	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	4	885	756	[6]45	([6])	93	[6]194	([6])	(D)
Galveston	33	(NA)	(NA)	[6]468	([6])	(NA)	(NA)	(NA)	(NA)
Garza	52	(NA)	(NA)	[6]160	([6])	(NA)	(NA)	(NA)	(NA)
Gillespie	3	(D)	(D)	[6]26	([6])	(D)	(D)	(D)	(D)
Glasscock	49	(NA)	(NA)	[6]167	([6])	(NA)	(NA)	(NA)	(NA)
Goliad	49	(NA)	(NA)	[6]106	([6])	(NA)	(NA)	(NA)	(NA)
Gonzales (mineral industries only)	7	(NA)	(NA)	[6]19	([6])	(NA)	(NA)	(NA)	(NA)
Gray, total	112	(NA)	(NA)	[6]1,289	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	103	(NA)	(NA)	[6]1,110	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	9	3,941	3,480	168	11	348	730	63	66
Grayson	51	(NA)	(NA)	[6]245	([6])	(NA)	(NA)	(NA)	(NA)
Gregg, total	298	(NA)	(NA)	[6]2,696	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	291	(NA)	(NA)	[6]2,371	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	7	8,548	7,954	287	38	586	1,301	196	355
Guadalupe (mineral industries only)	30	(NA)	(NA)	[6]141	([6])	(NA)	(NA)	(NA)	(NA)
Hansford	8	(NA)	(NA)	[6]51	([6])	(NA)	(NA)	(NA)	(NA)
Hardin	57	(NA)	(NA)	[6]450	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	54	(NA)	(NA)	[6]398	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Harris, total:									
Including operations in manufactures	212	(NA)	(NA)	[6]10,878	([6])	(NA)	(NA)	(NA)	(NA)
Mineral industries only	203	(NA)	(NA)	[6]10,833	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	183	(NA)	(NA)	[6]10,532	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	5	3,480	3,136	138	100	329	678	522	521
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	24	2,595	1,928	171	37	391	571	186	[2]2,185
Mineral industries only	15	2,060	1,644	126	37	301	433	186	2,185
Sand and gravel	11	824	627	48	7	111	163	20	3
Harrison, total (mineral industries only)	40	(NA)	(NA)	[6]284	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	34	(NA)	(NA)	[6]162	([6])	(NA)	(NA)	(NA)	(NA)
Lignite and Natural gas liquids	6	5,114	3,829	107	15	226	424	69	1,882
Hartley	4	(NA)	(NA)	[6]16	([6])	(NA)	(NA)	(NA)	(NA)
Haskell	45	(NA)	(NA)	[6]112	([6])	(NA)	(NA)	(NA)	(NA)
Henderson (mineral industries only), total	40	(NA)	(NA)	[6]197	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	33	(NA)	(NA)	[6]99	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	7	1,890	1,690	94	4	182	304	22	20
Hidalgo, total	29	(NA)	(NA)	[6]295	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	24	(NA)	(NA)	[6]166	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	5	3,732	3,521	120	9	300	363	49	312
Hockley	71	(NA)	(NA)	[6]614	([6])	(NA)	(NA)	(NA)	(NA)
Hopkins	16	(NA)	(NA)	[6]139	([6])	(NA)	(NA)	(NA)	(NA)
Houston	12	(NA)	(NA)	[6]96	([6])	(NA)	(NA)	(NA)	(NA)
Howard	85	(NA)	(NA)	[6]528	([6])	(NA)	(NA)	(NA)	(NA)
Hudspeth	5	593	419	49	6	107	131	19	85
Hutchinson, total	118	(NA)	(NA)	[6]2,012	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	110	(NA)	(NA)	[6]986	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	8	(D)	(D)	258	768	(D)	(D)	(D)	(D)
Irion	7	(NA)	(NA)	[6]11	([6])	(NA)	(NA)	(NA)	(NA)
Jack	125	(NA)	(NA)	[6]471	([6])	(NA)	(NA)	(NA)	(NA)
Jackson	73	(NA)	(NA)	[6]553	([6])	(NA)	(NA)	(NA)	(NA)
Jasper	5	(NA)	(NA)	[6]125	([6])	(NA)	(NA)	(NA)	(NA)
Jefferson	48	(NA)	(NA)	[6]1,448	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	45	(NA)	(NA)	[6]1,163	([6])	(NA)	(NA)	(NA)	(NA)
Jim Hogg	22	(NA)	(NA)	[6]182	([6])	(NA)	(NA)	(NA)	(NA)
Jim Wells	67	(NA)	(NA)	[6]1,157	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	64	(NA)	(NA)	[6]885	([6])	(NA)	(NA)	(NA)	(NA)
Jones (mineral industries only)	120	(NA)	(NA)	[6]686	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	117	(NA)	(NA)	[6]610	([6])	(NA)	(NA)	(NA)	(NA)
Karnes	29	(NA)	(NA)	[6]117	([6])	(NA)	(NA)	(NA)	(NA)
Kaufman	14	(NA)	(NA)	[6]52	([6])	(NA)	(NA)	(NA)	(NA)
Kent (crude petroleum and natural gas extraction)	18	(NA)	(NA)	[6]56	([6])	(NA)	(NA)	(NA)	(NA)
King	12	(NA)	(NA)	[6]33	([6])	(NA)	(NA)	(NA)	(NA)
Kleberg	7	(NA)	(NA)	[6]318	([6])	(NA)	(NA)	(NA)	(NA)
Knox	17	(NA)	(NA)	[6]18	([6])	(NA)	(NA)	(NA)	(NA)
Lamb	4	(NA)	(NA)	[6]15	([6])	(NA)	(NA)	(NA)	(NA)
La Salle	6	(NA)	(NA)	[6]44	([6])	(NA)	(NA)	(NA)	(NA)
Lavaca	17	(NA)	(NA)	[6]89	([6])	(NA)	(NA)	(NA)	(NA)
Liberty	72	(NA)	(NA)	[6]1,007	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	69	(NA)	(NA)	[6]763	([6])	(NA)	(NA)	(NA)	(NA)
Limestone	16	(NA)	(NA)	[6]134	([6])	(NA)	(NA)	(NA)	(NA)
Live Oak	32	(NA)	(NA)	[6]228	([6])	(NA)	(NA)	(NA)	(NA)
Loving	25	(NA)	(NA)	[6]75	([6])	(NA)	(NA)	(NA)	(NA)
Lubbock	15	(NA)	(NA)	[6]158	([6])	(NA)	(NA)	(NA)	(NA)
McLennan:									
Including operations in manufactures	9	(NA)	(NA)	[6]84	([6])	(NA)	(NA)	(NA)	(NA)
Mineral industries only	6	(NA)	(NA)	[6]53	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (including operations in manufactures)	6	824	623	78	4	183	224	15	20

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY--Continued									
McMullen	26	(NA)	(NA)	[6]56	([6])	(NA)	(NA)	(NA)	(NA)
Madison	7	(NA)	(NA)	[6]62	([6])	(NA)	(NA)	(NA)	(NA)
Marion	31	(NA)	(NA)	[6]78	([6])	(NA)	(NA)	(NA)	(NA)
Martin	9	(NA)	(NA)	[6]10	([6])	(NA)	(NA)	(NA)	(NA)
Matagorda (mineral industries only), total	45	(NA)	(NA)	[6]595	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	42	(NA)	(NA)	[6]519	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	3	5,499	3,463	59	17	120	280	93	774
Medina (mineral industries only)	6	(NA)	(NA)	[6]80	([6])	(NA)	(NA)	(NA)	(NA)
Midland, total	109	(NA)	(NA)	[6]2,943	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	106	(NA)	(NA)	[6]2,810	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	3	4,520	4,257	123	10	250	584	40	1,422
Milam	10	(NA)	(NA)	[6]106	([6])	(NA)	(NA)	(NA)	(NA)
Mitchell	32	(NA)	(NA)	[6]99	([6])	(NA)	(NA)	(NA)	(NA)
Montague	117	(NA)	(NA)	[6]463	([6])	(NA)	(NA)	(NA)	(NA)
Montgomery, total	57	(NA)	(NA)	[6]648	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	54	(NA)	(NA)	[6]500	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	3	5,647	5,209	141	7	291	682	55	100
Moore, total	15	(NA)	(NA)	[6]215	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	8	(NA)	(NA)	[6]18	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	7	11,630	10,821	164	33	331	768	165	788
Nacogdoches (including operations in manufactures)	3	(NA)	(NA)	[6]36	([6])	(NA)	(NA)	(NA)	(NA)
Navarro (mineral industries only)	37	(NA)	(NA)	[6]242	([6])	(NA)	(NA)	(NA)	(NA)
Newton	13	(NA)	(NA)	[6]16	([6])	(NA)	(NA)	(NA)	(NA)
Nolan (mineral industries only)	49	(NA)	(NA)	[6]212	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	44	(NA)	(NA)	[6]188	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	5	160	109	20	4	57	69	18	1,277
Nueces (mineral industries only), total	128	(NA)	(NA)	[6]1,957	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	112	(NA)	(NA)	[6]1,426	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	13	13,996	13,821	305	146	688	1,584	966	1,204
Nonmetallic minerals (except fuels) mining	3	399	276	54	26	112	125	114	20
Orange	27	(NA)	(NA)	[6]147	([6])	(NA)	(NA)	(NA)	(NA)
Palo Pinto (mineral industries only), total	26	(NA)	(NA)	[6]97	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	20	(NA)	(NA)	[6]46	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	6	398	333	33	2	67	122	11	59
Panola, total	38	(NA)	(NA)	[6]495	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	32	(NA)	(NA)	[6]217	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	6	20,824	21,586	262	16	561	1,180	88	1,810
Parker (mineral industries only)	11	(NA)	(NA)	[6]27	([6])	(NA)	(NA)	(NA)	(NA)
Pecos, total	140	(NA)	(NA)	[6]693	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	137	(NA)	(NA)	[6]680	([6])	(NA)	(NA)	(NA)	(NA)
Polk	31	(NA)	(NA)	[6]111	([6])	(NA)	(NA)	(NA)	(NA)
Potter, total	19	(NA)	(NA)	[6]339	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	15	(NA)	(NA)	[6]252	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	4	467	456	15	2	32	66	10	227
Presidio	4	(NA)	(NA)	[6]34	([6])	(NA)	(NA)	(NA)	(NA)
Reagan	58	(NA)	(NA)	[6]364	([6])	(NA)	(NA)	(NA)	(NA)
Reeves, total	17	(NA)	(NA)	[6]73	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	13	(NA)	(NA)	[6]28	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	4	281	290	20	1	38	72	3	44
Refugio	56	(NA)	(NA)	[6]641	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	53	(NA)	(NA)	[6]586	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Roberts	8	(NA)	(NA)	[6]65	([6])	(NA)	(NA)	(NA)	(NA)
Robertson	3	(NA)	(NA)	[6]34	([6])	(NA)	(NA)	(NA)	(NA)
Runnels	75	(NA)	(NA)	[6]442	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	72	(NA)	(NA)	[6]376	([6])	(NA)	(NA)	(NA)	(NA)
Rusk (mineral industries only), total	200	(NA)	(NA)	[6]1,785	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and nautral gas[7]	195	(NA)	(NA)	[6]1,540	([6])	(NA)	(NA)	(NA)	(MA)
Natural gas liquids	5	6,871	6,028	206	39	423	992	282	404
San Jacinto	10	(NA)	(NA)	[6]25	([6])	(NA)	(NA)	(NA)	(NA)
San Patricio, total	102	(NA)	(NA)	[6]704	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	98	(NA)	(NA)	[6]588	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	4	3,465	1,479	113	3	263	417	18	344
Schleicher	30	(NA)	(NA)	[6]99	([6])	(NA)	(NA)	(NA)	(NA)
Scurry, total	94	(NA)	(NA)	[6]680	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	88	(NA)	(NA)	[6]449	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	6	10,397	9,840	202	29	400	942	174	1,752
Shackelford, total	98	(NA)	(NA)	[6]343	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	95	(NA)	(NA)	[6]320	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	3	137	107	20	...	50	80	...	13
Shelby	6	(NA)	(NA)	[6]10	([6])	(NA)	(NA)	(NA)	(NA)
Smith	51	(NA)	(NA)	[6]670	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	47	(NA)	(NA)	[6]625	([6])	(NA)	(NA)	(NA)	(NA)
Starr (mineral industries only)	52	(NA)	(NA)	[6]445	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	49	(NA)	(NA)	[6]340	([6])	(NA)	(NA)	(NA)	(NA)
Stephens, total	39	(NA)	(NA)	[6]443	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	34	(NA)	(NA)	[6]316	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Crushed and broken sandstone	5	1,635	1,463	115	12	251	472	65	141
Sterling	15	(NA)	(NA)	[6]13	([6])	(NA)	(NA)	(NA)	(NA)
Stonewall	63	(NA)	(NA)	[6]283	([6])	(NA)	(NA)	(NA)	(NA)
Sutton	9	(NA)	(NA)	[6]46	([6])	(NA)	(NA)	(NA)	(NA)
Tarrant (mineral industries only), total	48	(NA)	(NA)	[6]1,666	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	33	(NA)	(NA)	[6]1,540	([6])	(NA)	(NA)	(NA)	(NA)
Metal mining and Sand and gravel	15	1,145	938	120	6	308	472	37	160
Taylor (mineral industries only), total	86	(NA)	(NA)	[6]916	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	81	(NA)	(NA)	[6]854	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Sand and gravel	5	397	332	59	3	159	197	13	26
Terry	32	(NA)	(NA)	[6]432	([6])	(NA)	(NA)	(NA)	(NA)
Throckmorton	70	(NA)	(NA)	[6]137	([6])	(NA)	(NA)	(NA)	(NA)
Titus	20	(NA)	(NA)	[6]233	([6])	(NA)	(NA)	(NA)	(NA)
Tom Green	34	(NA)	(NA)	[6]143	([6])	(NA)	(NA)	(NA)	(NA)
Travis (mineral industries only), total	10	(NA)	(NA)	[6]163	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	4	(NA)	(NA)	[6]26	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (mineral industries only)	6	1,426	884	121	16	252	348	77	100
Tyler	8	(NA)	(NA)	[6]21	([6])	(NA)	(NA)	(NA)	(NA)
Upshur	46	(NA)	(NA)	[6]197	([6])	(NA)	(NA)	(NA)	(NA)
Upton, total	115	(NA)	(NA)	[6]956	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	111	(NA)	(NA)	[6]782	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	4	(D)	(D)	152	22	(D)	(D)	(D)	(D)
Uvalde	3	(NA)	(NA)	[6]147	([6])	(NA)	(NA)	(NA)	(NA)
Van Zandt	15	(NA)	(NA)	[6]258	([6])	(NA)	(NA)	(NA)	(NA)
Victoria	72	(NA)	(NA)	[6]608	([6])	(NA)	(NA)	(NA)	(NA)
Walker	7	(NA)	(NA)	[6]62	([6])	(NA)	(NA)	(NA)	(NA)
Waller	6	(NA)	(NA)	[6]293	([6])	(NA)	(NA)	(NA)	(NA)
Ward	73	(NA)	(NA)	[6]461	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	68	(NA)	(NA)	[6]338	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	5	2,029	1,429	100	23	233	456	112	87

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Washington	5	(NA)	(NA)	[6]24	([6])	(NA)	(NA)	(NA)	(NA)
Webb	48	(NA)	(NA)	[6]239	([6])	(NA)	(NA)	(NA)	(NA)
Wharton	80	(NA)	(NA)	[6]1,212	([6])	(NA)	(NA)	(NA)	(NA)
Wheeler	39	(NA)	(NA)	[6]169	([6])	(NA)	(NA)	(NA)	(NA)
Wichita, total	273	(NA)	(NA)	[6]1,977	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	264	(NA)	(NA)	[6]1,815	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	6	2,123	1,964	138	14	277	644	83	101
Nonmetallic minerals (except fuels) mining	3	109	84	[6]10	([6])	17	[6]40	([6])	1
Wilbarger	72	(NA)	(NA)	[6]363	([6])	(NA)	(NA)	(NA)	(NA)
Willacy	13	(NA)	(NA)	[6]128	([6])	(NA)	(NA)	(NA)	(NA)
Williamson, total	11	(NA)	(NA)	[6]53	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	7	(NA)	(NA)	[6]15	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	4	349	201	34	4	68	75	31	31
Wilson (mineral industries only)	12	(NA)	(NA)	[6]36	([6])	(NA)	(NA)	(NA)	(NA)
Winkler, total	76	(NA)	(NA)	[6]1,268	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	71	(NA)	(NA)	[6]1,075	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	5	2,753	2,246	146	47	309	710	289	126
Wise (mineral industries only), total	30	(NA)	(NA)	[6]242	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	26	(NA)	(NA)	[6]68	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids and Nonmetallic minerals (except fuels) mining	4	2,546	1,708	155	19	370	580	74	41
Wood	110	(NA)	(NA)	[6]503	([6])	(NA)	(NA)	(NA)	(NA)
Yoakum	84	(NA)	(NA)	[6]548	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees		Man-hours worked by production and development workers (1,000)	Wages and salaries		New capital expenditures ($1,000)
				Production and development workers	All other employees		Production and development workers ($1,000)	All other employees ($1,000)	
COUNTY—Continued									
Young, total	203	(NA)	(NA)	[6]651	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	199	(NA)	(NA)	[6]626	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	4	360	298	25	...	70	95	1	12
Zapata	14	(NA)	(NA)	[6]61	([6])	(NA)	(NA)	(NA)	(NA)
Offshore	7	(NA)	(NA)	[6]178	([6])	(NA)	(NA)	(NA)	(NA)

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 7.
[2]See table 2, footnote 11.
[3]See table 2, footnote 6.
[4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.
[5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.
[6]Figures for "All other employees" are included with those for "Production and development workers."
[7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number
industries represents number of establishments

	State and county	All mineral operations			Metal mining					Lignite
		Total	Classified in mineral industries	Included in manufactures	Iron ores	Copper ores	Lead and zinc ores	Silver ores	Metal mining contract services	
1	Texas, total	5,345	5,264	81	5	1	1	1	3	2
2	Anderson	36	36	...	...	...	...	...	...	...
3	Andrews	119	119	...	...	...	...	...	...	...
4	Angelina	5	5	...	...	...	...	...	...	...
5	Aransas	27	27	...	...	...	...	...	...	...
6	Archer	233	233	...	...	...	...	...	...	...
7	Atascosa	54	54	...	...	...	...	...	...	...
8	Austin	16	16	...	...	...	...	...	...	...
9	Bastrop	11	9	2	...	...	...	...	...	...
10	Baylor	21	21	...	...	...	...	...	...	...
11	Bee	63	63	...	...	...	...	...	...	...
12	Bell	2	2	...	...	...	...	...	...	...
13	Bexar	77	73	4	...	...	...	...	...	...
14	Borden	42	42	...	...	...	...	...	...	...
15	Bosque	1	1	...	...	...	...	...	...	...
16	Bowie	3	2	1	...	...	...	...	...	...
17	Brazoria	85	85	...	...	...	...	...	...	...
18	Brazos	2	2	...	...	...	...	...	...	...
19	Brewster	3	1	2	...	...	...	...	...	...
20	Briscoe	2	2	...	...	...	...	...	...	...
21	Brooks	20	20	...	...	...	...	...	...	...
22	Brown	71	69	2	...	...	...	...	...	...
23	Burnet	6	5	1	...	...	...	...	...	...
24	Caldwell	56	56	...	...	...	...	...	...	...
25	Calhoun	22	22	...	...	...	...	...	...	...
26	Callahan	65	65	...	...	...	...	...	...	...
27	Cameron	4	4	...	...	...	...	...	...	...
28	Camp	12	12	...	...	...	...	...	...	...
29	Carson	50	50	...	...	...	...	...	...	...
30	Cass	19	19	...	2	...	...	...	...	...
31	Chambers	36	36	...	...	...	...	...	...	...
32	Cherokee	10	10	...	2	...	...	...	...	...
33	Clay	91	91	...	...	...	...	...	...	...
34	Cochran	61	61	...	...	...	...	...	...	...
35	Coke	36	36	...	...	...	...	...	...	...
36	Coleman	112	111	1	...	...	...	...	...	...
37	Collin	1	1	...	...	...	...	...	...	...
38	Collingsworth	3	3	...	...	...	...	...	...	...
39	Colorado	34	32	2	...	...	...	...	...	...
40	Comal	4	3	1	...	...	...	...	...	...
41	Comanche	11	11	...	...	...	...	...	...	...
42	Concho	5	5	...	...	...	...	...	...	...
43	Cooke	75	75	...	...	...	...	...	...	...
44	Cottle	1	1	...	...	...	...	...	...	...
45	Crane	69	69	...	...	...	...	...	...	...
46	Crockett	70	70	...	...	...	...	...	...	...
47	Crosby	3	3	...	...	...	...	...	...	...
48	Culberson	2	2	...	...	...	...	...	...	...
49	Dallas	108	100	8	...	...	...	...	...	...
50	Dawson	34	34	...	...	...	...	...	...	...
51	Denton	21	20	1	...	...	...	...	...	...
52	De Witt	38	38	...	...	...	...	...	...	...
53	Dickens	3	3	...	...	...	...	...	...	...
54	Dimmit	4	4	...	...	...	...	...	...	...
55	Donley	1	1	...	...	...	...	...	...	...
56	Duval	113	113	...	...	...	...	...	...	...
57	Eastland	69	68	1	...	...	...	...	...	...
58	Ector	124	124	...	...	...	...	...	...	...
59	Edwards	3	3	...	...	...	...	...	...	...
60	Ellis	5	3	2	...	...	...	...	...	...
61	El Paso	10	6	4	...	...	...	...	...	...
62	Erath	3	3	...	...	...	...	...	...	...
63	Falls	1	1	...	...	...	...	...	...	...
64	Fayette	13	13	...	...	...	...	...	...	...
65	Fisher	46	46	...	...	...	...	...	...	...
66	Floyd	3	3	...	...	...	...	...	...	...
67	Foard	5	5	...	...	...	...	...	...	...
68	Fort Bend	59	59	...	...	...	...	...	...	...
69	Franklin	14	14	...	...	...	...	...	...	...
70	Freestone	12	12	...	...	...	...	...	...	...
71	Frio	34	34	...	...	...	...	...	...	...
72	Gaines	73	73	...	...	...	...	...	...	...
73	Galveston	33	33	...	...	...	...	...	...	...
74	Garza	52	52	...	...	...	...	...	...	...
75	Gillespie	3	3	...	...	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954

of establishments; for operations classified in the manufacturing including a mine or quarry)

Crude petroleum and natural gas extraction			Nonmetallic minerals (except fuels) mining											
			Dimension stone					Crushed and broken stone						
			Limestone		Granite			Limestone						
Crude petroleum and Natural gas[1]	Natural gas liquids: Natural gasoline	Natural gas liquids: Cycle condensate	Oil and gas field contract services[2]	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Sandstone	Classified in mineral industries	Included in manufactures	Marble	Trap rock	Sandstone	Stone, n.e.c.	
2,837	204	27	1,918	3	5	1	2	2	22	21	1	1	1	4	1
34	1	1		...	...	...	...	...	...	...	...	...	...	...	2
112	7	...		...	...	...	...	...	...	...	...	...	...	...	3
2	...	...		...	...	...	...	...	...	...	...	...	...	...	4
27	...	...		...	...	...	...	...	...	...	...	...	...	...	5
230	3	...		...	...	...	...	...	...	...	...	...	...	...	6
51	1	...		...	...	...	...	...	...	...	...	...	...	...	7
16	...	...		...	...	...	...	...	...	...	...	...	...	...	8
9	...	...		...	...	...	...	...	...	...	...	...	...	...	9
21	...	...		...	...	...	...	...	...	...	...	...	...	...	10
60	...	2		...	...	...	...	...	1	...	...	...	...	...	11
...	...	...		...	...	...	...	...	...	...	...	...	...	...	12
58	...	...		...	...	...	...	...	2	1	...	...	...	...	13
42	...	...		...	...	...	...	...	...	...	...	...	...	...	14
1	...	...		...	...	...	...	...	...	...	...	...	...	...	15
1	...	...		...	...	...	...	...	...	...	...	...	...	...	16
78	4	...		...	...	...	...	...	...	...	...	...	...	...	17
2	...	...		...	...	...	...	...	...	...	...	...	...	...	18
...	...	...		...	...	...	...	...	...	...	...	...	...	...	19
1	...	...		...	...	...	...	...	...	...	...	...	...	...	20
20	...	...		...	...	...	...	...	...	...	...	...	...	...	21
67	1	...		...	...	...	...	...	1	...	...	...	...	...	22
...	...	...		...	...	...	1	...	...	...	...	...	...	1	23
56	...	...		...	...	...	...	...	...	...	...	...	...	...	24
21	1	...		...	...	...	...	...	...	...	...	...	...	...	25
65	...	...		...	...	...	...	...	...	...	...	...	...	...	26
4	...	...		...	...	...	...	...	...	...	...	...	...	...	27
12	...	...		...	...	...	...	...	...	...	...	...	...	...	28
47	3	...		...	...	...	...	...	...	...	...	...	...	...	29
16	1	...		...	...	...	...	...	...	...	...	...	...	...	30
35	1	...		...	...	...	...	...	...	...	...	...	...	...	31
7	...	...		...	...	...	...	...	...	...	...	...	...	...	32
90	1	...		...	...	...	...	...	...	...	...	...	...	...	33
60	1	...		...	...	...	...	...	...	...	...	...	...	...	34
34	1	...		...	...	...	...	...	...	...	...	...	...	...	35
106	3	...		...	...	...	...	...	...	...	...	...	...	...	36
1	...	...		...	...	...	...	...	...	...	...	...	...	...	37
3	...	...	(NA)	...	...	...	...	...	...	...	...	...	...	...	38
22	2	1		...	...	...	...	...	...	1	...	...	...	...	39
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11	...	...		...	...	...	...	...	...	...	...	...	...	...	41
5	...	...		...	...	...	...	...	...	...	...	...	...	...	42
73	2	...		...	...	...	...	...	...	...	...	...	...	...	43
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66	2	...		...	...	...	...	...	...	...	...	...	...	...	45
69	1	...		...	...	...	...	...	...	...	...	...	...	...	46
3	...	...		...	...	...	...	...	...	...	...	...	...	...	47
2	...	...		...	...	...	...	...	...	...	...	...	...	...	48
76	...	...		...	...	...	...	...	...	3	...	...	...	...	49
33	...	...		...	...	...	...	...	1	...	...	...	...	...	50
16	...	...		...	...	...	...	...	...	...	...	...	...	...	51
37	...	1		...	...	...	...	...	...	...	...	...	...	...	52
2	...	...		...	...	...	...	...	...	...	...	...	...	...	53
4	...	...		...	...	...	...	...	...	...	...	...	...	...	54
1	...	...		...	...	...	...	...	...	...	...	...	...	...	55
109	2	2		...	...	...	...	...	...	...	...	...	...	...	56
57	7	...		...	...	...	...	...	...	...	...	...	...	1	57
117	6	...		...	...	...	...	...	...	...	...	...	...	...	58
3	...	...		...	...	...	...	...	...	...	...	...	...	...	59
3	...	...		...	...	...	...	...	...	...	...	...	...	...	60
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3	...	...		...	...	...	...	...	...	...	...	...	...	...	62
1	...	...		...	...	...	...	...	...	...	...	...	...	...	63
7	...	...		...	...	...	...	...	...	...	...	...	...	...	64
45	1	...		...	...	...	...	...	...	...	...	...	...	...	65
2	...	...		...	...	...	...	...	...	...	...	...	...	...	66
5	...	...		...	...	...	...	...	...	...	...	...	...	...	67
56	...	...		...	...	...	...	...	...	...	...	...	...	...	68
14	...	...		...	...	...	...	...	...	...	...	...	...	...	69
10	...	...		...	...	...	...	...	...	...	...	...	...	...	70
34	...	...		...	...	...	...	...	...	...	...	...	...	...	71
69	2	...		...	...	...	...	...	1	...	...	...	...	...	72
33	...	...		...	...	...	...	...	...	...	...	...	...	...	73
51	...	...		...	...	...	...	...	...	...	...	...	...	...	74
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Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number
industries represents number of establishments

	State and county	Nonmetallic minerals (except fuels) mining—Continued										
		Sand and gravel			Clay, ceramic, and refractory minerals							
						Fire clay					Clay, ceramic, and refractory minerals, n.e.c.	
		Common sand and gravel	Glass sand	Foundry sand	Bentonite	Classified in mineral industries	Included in manufactures	Fuller's earth	Kaolin and ball clay (included in manufactures)	Feldspar	Classified in mineral industries	Included in manufactures
1	Texas, total	153	5	6	7	6	8	4	1	2	10	40
2	Anderson	...	...	...	...	...	...	...	...	...	...	...
3	Andrews	...	...	...	...	...	...	...	...	...	...	...
4	Angelina	...	...	...	2	...	...	...	...	...	...	...
5	Aransas	...	...	...	...	...	...	...	...	...	...	...
6	Archer	...	...	...	...	...	...	...	...	...	...	...
7	Atascosa	1	1	...	...	...	...	...	...	...	...	...
8	Austin	...	...	...	...	...	...	...	...	...	...	...
9	Bastrop	...	...	...	...	...	2	...	...	...	...	...
10	Baylor	...	...	...	...	...	...	...	...	...	...	...
11	Bee	...	...	...	...	...	...	...	...	...	...	...
12	Bell	2	...	...	...	...	...	...	...	...	...	...
13	Bexar	11	...	1	...	1	2	...	...	...	...	1
14	Borden	...	...	...	...	...	...	...	...	...	...	...
15	Bosque	...	...	...	...	...	...	...	...	...	...	...
16	Bowie	1	...	...	...	...	...	...	...	...	...	1
17	Brazoria	...	...	...	...	...	...	...	...	...	...	...
18	Brazos	...	...	...	...	...	...	...	...	...	...	...
19	Brewster	...	...	...	...	...	...	...	...	...	...	...
20	Briscoe	...	...	...	...	...	...	1	...	...	...	...
21	Brooks	...	...	...	...	...	...	...	...	...	...	...
22	Brown	...	...	...	...	...	1	...	...	...	...	1
23	Burnet	...	...	...	...	...	...	...	...	1	...	...
24	Caldwell	...	...	...	...	...	...	...	...	...	...	...
25	Calhoun	...	...	...	...	...	...	...	...	...	...	...
26	Callahan	...	...	...	...	...	...	...	...	...	...	...
27	Cameron	...	...	...	...	...	...	...	...	...	...	...
28	Camp	...	...	...	...	...	...	...	...	...	...	...
29	Carson	...	...	...	...	...	...	...	...	...	...	...
30	Cass	...	...	...	...	...	...	...	...	...	...	...
31	Chambers	...	...	...	...	...	...	...	...	...	...	...
32	Cherokee	...	...	...	...	...	...	...	...	...	1	...
33	Clay	...	...	...	...	...	...	...	...	...	...	...
34	Cochran	...	...	...	...	...	...	...	...	...	...	...
35	Coke	1	...	...	...	...	...	...	...	...	...	...
36	Coleman	1	1	...	...	...	...	...	...	...	...	1
37	Collin	...	...	...	...	...	...	...	...	...	...	...
38	Collingsworth	...	...	...	...	...	...	...	...	...	...	...
39	Colorado	7	...	...	...	...	...	...	...	...	...	1
40	Comal	1	...	...	...	...	...	...	...	...	...	...
41	Comanche	...	...	...	...	...	...	...	...	...	...	...
42	Concho	...	...	...	...	...	...	...	...	...	...	...
43	Cooke	...	...	...	...	...	...	...	...	...	...	...
44	Cottle	1	...	...	...	...	...	...	...	...	...	...
45	Crane	...	...	...	...	...	...	...	...	...	...	...
46	Crockett	...	...	...	...	...	...	...	...	...	...	...
47	Crosby	...	...	...	...	...	...	...	...	...	...	...
48	Culberson	...	...	...	...	...	...	...	...	...	...	...
49	Dallas	23	...	...	...	...	...	...	...	...	1	5
50	Dawson	...	...	...	...	...	...	...	...	...	...	...
51	Denton	4	...	...	...	...	1	...	...	...	...	...
52	De Witt	...	...	...	...	...	...	...	...	...	...	...
53	Dickens	...	...	...	...	...	...	...	...	...	...	...
54	Dimmit	...	...	...	...	...	...	...	...	...	...	...
55	Donley	...	...	...	...	...	...	...	...	...	...	...
56	Duval	...	...	...	...	...	...	...	...	...	...	...
57	Eastland	1	...	...	...	...	1	...	...	...	2	...
58	Ector	...	...	...	...	...	...	...	...	...	...	...
59	Edwards	...	...	...	...	...	...	...	...	...	...	...
60	Ellis	...	...	...	...	...	...	...	...	...	...	2
61	El Paso	1	...	...	...	...	...	...	...	...	...	1
62	Erath	...	...	...	...	...	...	...	...	...	...	...
63	Falls	...	...	...	...	...	...	...	...	...	...	...
64	Fayette	2	...	...	2	...	...	1	...	...	...	...
65	Fisher	...	...	...	...	...	...	...	...	...	...	...
66	Floyd	1	...	...	...	...	...	...	...	...	...	...
67	Foard	...	...	...	...	...	...	...	...	...	...	...
68	Fort Bend	...	...	...	...	...	...	...	...	...	...	...
69	Franklin	...	...	...	...	...	...	...	...	...	...	...
70	Freestone	...	...	1	...	...	...	...	...	...	1	...
71	Frio	...	...	...	...	...	...	...	...	...	...	...
72	Gaines	...	...	...	...	...	...	...	...	...	...	...
73	Galveston	...	...	...	...	...	...	...	...	...	...	...
74	Garza	1	...	...	...	...	...	...	...	...	...	...
75	Gillespie	2	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954—Continued

of establishments; for operations classified in the manufacturing including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued													
Natural abrasive stones	Chemical and fertilizer mineral mining				Non-metallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels) mining							
	Potash, soda, and borate minerals	Rock salt	Sulfur	Chemical and fertilizer mineral mining, n.e.c.		Gypsum		Native asphalt and bitumens	Pumice and pumicite	Talc, soapstone, and pyro-phyllite	Peat	Non-metallic minerals, n.e.c.	
						Classified in mineral industries	Included in manu-factures						
1	1	1	10	6	7	2	4	2	3	1	1	2	1
...	...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	1	...	...	...	...	...	...	...	4
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...	...	...	...	...	...	...	...	...	...	...	...	...	6
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Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number industries represents number of establishments

	State and county	All mineral operations			Metal mining					Lignite
		Total	Classified in mineral industries	Included in manufactures	Iron ores	Copper ores	Lead and zinc ores	Silver ores	Metal mining contract services	
1	Glasscock	49	49	...	...	...	...	...	...	...
2	Goliad	49	49	...	...	...	...	...	...	...
3	Gonzales	8	7	1	...	...	...	...	...	...
4	Gray	112	112	...	...	...	...	...	...	...
5	Grayson	51	51	...	...	...	...	...	...	...
6	Gregg	298	298	...	...	...	...	...	...	...
7	Grimes	7	7	...	...	...	...	...	...	...
8	Guadalupe	31	30	1	...	...	...	...	...	...
9	Hale	9	9	...	...	...	...	...	...	...
10	Hall	1	1	...	...	...	...	...	...	...
11	Hamilton	3	3	...	...	...	...	...	...	...
12	Hansford	8	8	...	...	...	...	...	...	...
13	Hardeman	3	2	1	...	...	...	...	...	...
14	Hardin	57	57	...	...	...	...	...	...	...
15	Harris	212	203	9	...	...	...	...	...	...
16	Harrison	43	40	3	...	...	...	...	...	1
17	Hartley	4	4	...	...	...	...	...	...	...
18	Haskell	45	45	...	...	...	...	...	...	...
19	Hays	2	2	...	...	...	...	...	...	...
20	Henderson	41	40	1	...	...	...	...	...	...
21	Hidalgo	29	29	...	...	...	...	...	...	...
22	Hockley	71	71	...	...	...	...	...	...	...
23	Hood	3	3	...	...	...	...	...	...	...
24	Hopkins	16	16	...	...	...	...	...	...	...
25	Houston	12	12	...	...	...	...	...	...	...
26	Howard	85	85	...	...	...	...	...	...	...
27	Hudspeth	5	5	...	...	1	...	...	...	...
28	Hunt	2	2	...	...	...	...	...	...	...
29	Hutchinson	118	118	...	...	...	...	...	...	...
30	Irion	7	7	...	...	...	...	...	...	...
31	Jack	125	125	...	...	...	...	...	...	...
32	Jackson	73	73	...	...	...	...	...	...	...
33	Jasper	5	5	...	...	...	...	...	...	...
34	Jefferson	48	48	...	...	...	...	...	...	...
35	Jim Hogg	22	22	...	...	...	...	...	...	...
36	Jim Wells	67	67	...	...	...	...	...	...	...
37	Johnson	2	1	1	...	...	...	...	...	...
38	Jones	122	120	2	...	...	...	...	...	...
39	Karnes	29	29	...	...	...	...	...	...	...
40	Kaufman	14	14	...	...	...	...	...	...	...
41	Kendall	1	1	...	...	...	...	...	...	...
42	Kenedy	2	2	...	...	...	...	...	...	...
43	Kent	18	18	...	...	...	...	...	...	...
44	Kerr	1	1	...	...	...	...	...	...	...
45	Kimble	1	1	...	...	...	...	...	...	...
46	King	12	12	...	...	...	...	...	...	...
47	Kleberg	7	7	...	...	...	...	...	...	...
48	Knox	17	17	...	...	...	...	...	...	...
49	Lamar	2	2	...	...	...	...	...	...	...
50	Lamb	4	4	...	...	...	...	...	...	...
51	Lampasas	1	1	...	...	...	...	...	...	...
52	La Salle	6	6	...	...	...	...	...	...	...
53	Lavaca	17	17	...	...	...	...	...	...	...
54	Lee	2	2	...	...	...	...	...	...	...
55	Leon	3	3	...	...	...	...	...	...	...
56	Liberty	72	72	...	...	...	...	...	...	...
57	Limestone	16	16	...	...	...	...	...	...	...
58	Live Oak	32	32	...	...	...	...	...	...	...
59	Llano	3	2	1	...	...	...	...	...	...
60	Loving	25	25	...	...	...	...	...	...	...
61	Lubbock	15	15	...	...	...	...	...	...	...
62	Lynn	5	5	...	...	...	...	...	...	...
63	McCullock	1	1	...	...	...	...	...	...	...
64	McLennan	9	6	3	...	...	...	...	...	...
65	McMullen	26	26	...	...	...	...	...	...	...
66	Madison	7	7	...	...	...	...	...	...	...
67	Marion	31	31	...	...	...	...	...	...	...
68	Martin	9	9	...	...	...	...	...	...	...
69	Matagorda	46	45	1	...	...	...	...	...	...
70	Maverick	1	1	...	...	...	...	...	...	...
71	Medina	7	6	1	...	...	...	...	...	...
72	Menard	3	3	...	...	...	1	1	...	...
73	Midland	109	109	...	...	...	...	...	...	...
74	Milam	10	10	...	...	...	...	...	...	1
75	Mills	1	1	...	...	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954—Continued

of establishments; for operations classified in the manufacturing including a mine or quarry)

Crude petroleum and natural gas extraction				Nonmetallic minerals (except fuels) mining											
				Dimension stone					Crushed and broken stone						
				Limestone		Granite			Limestone						
Crude petroleum and Natural gas[1]	Natural gas liquids: Natural gasoline	Natural gas liquids: Cycle condensate	Oil and gas field contract services[2]	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Sandstone	Classified in mineral industries	Included in manufactures	Marble	Trap rock	Sandstone	Stone, n.e.c.	
49	...	...		...	...	...	...	...	...	...	...	...	...	...	1
49	...	...		...	...	...	...	...	...	...	...	...	...	...	2
4	...	...		...	...	...	...	...	...	...	...	...	...	...	3
103	7	...		...	...	...	...	...	...	...	...	...	...	...	4
49	...	...		...	...	...	...	...	...	...	...	1	...	...	5
291	7	...		...	...	...	...	...	...	...	...	...	...	...	6
6	...	...		...	...	...	...	...	...	...	...	...	...	...	7
30	...	...		...	...	...	...	...	...	...	...	...	...	...	8
9	...	...		...	...	...	...	...	...	...	...	...	...	...	9
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2	...	...		...	...	...	...	...	...	...	...	...	...	...	11
6	2	...		...	...	...	...	...	...	...	...	...	...	...	12
1	...	...		...	...	...	...	...	...	...	...	...	...	...	13
54	1	1		...	...	...	...	...	...	...	...	...	...	...	14
183	4	1		...	...	...	...	...	...	3	...	...	...	...	15
34	5	...		...	...	...	...	...	...	...	...	...	...	...	16
4	...	...		...	...	...	...	...	...	...	...	...	...	...	17
44	...	...		...	...	...	...	...	...	...	...	...	...	...	18
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33	1	1		...	...	...	...	...	...	...	...	...	...	...	20
24	...	1		...	...	...	...	...	1	...	...	...	...	...	21
68	3	...		...	...	...	...	...	...	...	...	...	...	...	22
2	...	...		...	...	...	...	...	...	...	...	...	...	...	23
15	1	...		...	...	...	...	...	...	...	...	...	...	...	24
11	...	1		...	...	...	...	...	...	...	...	...	...	...	25
83	1	...		...	...	...	...	...	...	...	...	...	...	...	26
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2	...	...		...	...	...	...	...	...	...	...	...	...	...	28
110	8	...		...	...	...	...	...	...	...	...	...	...	...	29
7	...	...		...	...	...	...	...	...	...	...	...	...	...	30
124	1	...		...	...	...	...	...	...	...	...	...	...	...	31
71	1	1		...	...	...	...	...	...	...	...	...	...	...	32
4	...	...		...	...	...	...	...	...	...	...	...	...	...	33
45	1	...		...	...	...	...	...	...	...	...	...	...	...	34
22	...	...		...	...	...	...	...	...	...	...	...	...	...	35
64	...	2		...	...	...	...	...	...	...	...	...	...	...	36
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117	1	...	(NA)	1	1	...	...	...	...	1	...	...	...	...	38
28	1	...		...	...	...	...	...	...	...	...	...	...	...	39
13	...	...		...	...	...	...	...	...	...	...	...	...	...	40
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12	...	...		...	...	...	...	...	...	...	...	...	...	...	46
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17	...	...		...	...	...	...	...	...	...	...	...	...	...	48
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15	2	...		...	...	...	...	...	...	...	...	...	...	...	53
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3	...	...		...	...	...	...	...	...	...	...	...	...	...	55
69	1	...		...	...	...	...	...	...	...	...	...	...	...	56
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31	1	...		...	...	...	...	...	...	...	...	...	...	...	58
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25	...	...		...	...	...	...	...	...	...	...	...	...	...	60
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26	...	...		...	...	...	...	...	...	...	...	...	...	...	65
7	...	...		...	...	...	...	...	...	...	...	...	...	...	66
30	1	...		...	...	...	...	...	...	...	...	...	...	...	67
9	...	...		...	...	...	...	...	...	...	...	...	...	...	68
42	2	1		...	...	...	...	...	...	...	...	...	...	...	69
1	...	...		...	...	...	...	...	...	...	...	...	...	...	70
6	...	...		...	...	...	...	...	...	...	...	...	...	...	71
1	...	...		...	...	...	...	...	...	...	...	...	...	...	72
106	3	...		...	...	...	...	...	...	...	...	...	...	...	73
8	...	...		...	...	...	...	...	...	...	...	...	...	...	74
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Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number industries represents number of establishments

	State and county	Nonmetallic minerals (except fuels) mining—Continued										
		Sand and gravel			Clay, ceramic, and refractory minerals							
						Fire clay					Clay, ceramic, and refractory minerals, n.e.c.	
		Common sand and gravel	Glass sand	Foundry sand	Bentonite	Classified in mineral industries	Included in manufactures	Fuller's earth	Kaolin and ball clay (included in manufactures)	Feldspar	Classified in mineral industries	Included in manufactures
1	Glasscock	...	...	...	...	...	...	...	...	...	...	...
2	Goliad	...	...	...	...	...	...	...	...	...	...	...
3	Gonzales	1	...	...	1	...	...	...	...	...	1	1
4	Gray	1	...	1	...	...	...	...	...	...	...	...
5	Grayson	1	...	...	...	...	...	...	...	...	...	...
6	Gregg	...	...	...	...	...	...	...	...	...	...	...
7	Grimes	1	...	...	...	...	...	...	...	...	...	...
8	Guadalupe	...	...	...	...	...	...	...	...	...	...	1
9	Hale	...	...	...	...	...	...	...	...	...	...	...
10	Hall	1	...	...	...	...	...	...	...	...	...	...
11	Hamilton	1	...	...	...	...	...	...	...	...	...	...
12	Hansford	...	...	...	...	...	...	...	...	...	...	...
13	Hardeman	1	...	...	...	...	...	...	...	...	...	...
14	Hardin	...	...	1	...	...	...	...	...	...	...	...
15	Harris	11	...	...	...	...	...	...	...	...	1	6
16	Harrison	...	...	...	...	...	1	...	...	...	...	2
17	Hartley	...	...	...	...	...	...	...	...	...	...	...
18	Haskell	1	...	...	...	...	...	...	...	...	...	...
19	Hays	2	...	...	...	...	...	...	...	...	...	...
20	Henderson	1	...	...	...	4	...	...	...	...	...	1
21	Hidalgo	2	1	...	...	...	...	...	...	...	...	...
22	Hockley	...	...	...	...	...	...	...	...	...	...	...
23	Hood	1	...	...	...	...	...	...	...	...	...	...
24	Hopkins	...	...	...	...	...	...	...	...	...	...	...
25	Houston	...	...	...	...	...	...	...	...	...	...	...
26	Howard	1	...	...	...	...	...	...	...	...	...	...
27	Hudspeth	...	...	...	...	...	...	...	...	...	...	...
28	Hunt	...	...	...	...	...	...	...	...	...	...	...
29	Hutchinson	...	...	...	...	...	...	...	...	...	...	...
30	Irion	...	...	...	...	...	...	...	...	...	...	...
31	Jack	...	...	...	...	...	...	...	...	...	...	...
32	Jackson	...	...	...	...	...	...	...	...	...	...	...
33	Jasper	...	...	...	1	...	...	...	...	...	...	...
34	Jefferson	1	...	...	...	...	...	...	...	...	...	...
35	Jim Hogg	...	...	...	...	...	...	...	...	...	...	...
36	Jim Wells	1	...	...	...	...	...	...	...	...	...	...
37	Johnson	1	...	...	...	...	...	...	...	...	...	...
38	Jones	1	...	...	...	...	...	...	...	...	...	...
39	Karnes	...	...	...	...	...	...	...	...	...	...	...
40	Kaufman	1	...	...	...	...	...	...	...	...	...	...
41	Kendall	1	...	...	...	...	...	...	...	...	...	...
42	Kenedy	...	...	...	...	...	...	...	...	...	...	...
43	Kent	...	...	...	...	...	...	...	...	...	...	...
44	Kerr	...	...	...	...	...	...	...	...	...	...	...
45	Kimble	...	...	...	...	...	...	...	...	...	...	...
46	King	...	...	...	...	...	...	...	...	...	...	...
47	Kleberg	...	...	...	...	...	...	...	...	...	...	...
48	Knox	...	...	...	...	...	...	...	...	...	...	...
49	Lamar	1	...	...	...	...	...	...	...	...	...	...
50	Lamb	...	...	...	...	...	...	...	...	...	...	...
51	Lampasas	...	...	...	...	...	...	...	...	...	...	...
52	La Salle	...	...	...	...	...	...	...	...	...	...	...
53	Lavaca	...	...	...	...	...	...	...	...	...	...	...
54	Lee	...	...	...	...	...	...	...	...	...	...	...
55	Leon	...	...	...	...	...	...	...	...	...	...	...
56	Liberty	1	...	...	...	...	...	...	...	...	...	...
57	Limestone	...	...	...	...	...	...	...	...	...	...	...
58	Live Oak	...	...	...	...	...	...	...	...	...	...	...
59	Llano	...	...	...	...	...	...	...	...	1	...	...
60	Loving	...	...	...	...	...	...	...	...	...	...	...
61	Lubbock	1	...	...	...	...	...	...	...	...	...	...
62	Lynn	...	...	...	...	...	...	...	...	...	...	...
63	McCulloch	1	...	...	...	...	...	...	...	...	...	...
64	McLennan	3	...	...	...	...	...	...	...	...	...	1
65	McMullen	...	...	...	...	...	...	...	...	...	...	...
66	Madison	...	...	...	...	...	...	...	...	...	...	...
67	Marion	...	...	...	...	...	...	...	...	...	...	...
68	Martin	...	...	...	...	...	...	...	...	...	...	...
69	Matagorda	...	...	...	...	...	...	...	...	...	...	1
70	Maverick	...	...	...	...	...	...	...	...	...	...	...
71	Medina	...	...	...	...	...	...	...	...	...	...	1
72	Menard	...	...	...	...	...	...	...	...	...	...	...
73	Midland	...	...	...	...	...	...	...	...	...	...	...
74	Milam	1	...	...	...	...	...	...	...	...	...	...
75	Mills	1	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954—Continued

of establishments; for operations classified in the manufacturing including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued													
Natural abrasive stones	Chemical and fertilizer mineral mining				Non-metallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels) mining							
	Potash, soda, and borate minerals	Rock salt	Sulfur	Chemical and fertilizer mineral mining, n.e.c.		Gypsum		Native asphalt and bitumens	Pumice and pumicite	Talc, soapstone, and pyro-phyllite	Peat	Non-metallic minerals, n.e.c.	
						Classified in mineral industries	Included in manu-factures						
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...	...	...	...	...	...	...	...	...	...	...	...	...	58
...	...	...	...	...	1	...	...	...	...	...	...	...	59
...	...	...	...	...	...	...	...	...	...	...	...	...	60
...	...	...	...	...	...	...	...	...	...	...	...	...	61
...	...	...	...	...	...	...	...	...	...	...	...	...	62
...	...	...	...	...	...	...	...	...	...	...	...	...	63
...	...	...	...	...	...	...	...	...	...	...	...	...	64
...	...	...	...	...	...	...	...	...	...	...	...	...	65
...	...	...	...	...	...	...	...	...	...	...	...	...	66
...	...	...	...	...	...	...	...	...	...	...	...	...	67
...	...	...	...	...	...	...	...	...	...	...	...	...	68
...	...	...	...	...	...	...	...	...	...	...	...	...	69
...	...	...	...	...	...	...	...	...	...	...	...	...	70
...	...	...	...	...	...	...	...	...	...	...	...	...	71
...	...	...	...	...	...	...	...	...	...	...	...	...	72
...	...	...	...	...	...	...	...	...	...	...	...	...	73
...	...	...	...	...	...	...	...	...	...	...	...	...	74
...	...	...	...	...	...	...	...	...	...	...	...	...	75

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number industries represents number of establishments

	State and county	All mineral operations			Metal mining					Lignite
		Total	Classified in mineral industries	Included in manufactures	Iron ores	Copper ores	Lead and zinc ores	Silver ores	Metal mining contract services	
1	Mitchell	32	32	...	...	...	...	...	...	...
2	Montague	117	117	...	...	...	...	...	...	...
3	Montgomery	57	57	...	...	...	...	...	...	...
4	Moore	15	15	...	...	...	...	...	...	...
5	Morris	1	1	...	1	...	...	...	...	...
6	Motley	2	2	...	...	...	...	...	...	...
7	Nacogdoches	3	2	1	...	...	...	...	...	...
8	Navarro	38	37	1	...	...	...	...	...	...
9	Newton	13	13	...	...	...	...	...	...	...
10	Nolan	52	49	3	...	...	...	...	...	...
11	Nueces	130	128	2	...	...	...	...	...	...
12	Ochiltree	2	2	...	...	...	...	...	...	...
13	Oldham	2	2	...	...	...	...	...	...	...
14	Orange	27	27	...	...	...	...	...	...	...
15	Palo Pinto	27	26	1	...	...	...	...	...	...
16	Panola	38	38	...	...	...	...	...	...	...
17	Parker	12	11	1	...	...	...	...	...	...
18	Pecos	140	140	...	...	...	...	...	...	...
19	Polk	31	31	...	...	...	...	...	...	...
20	Potter	19	19	...	...	...	...	...	...	...
21	Presidio	4	4	...	...	...	...	...	2	...
22	Reagan	58	58	...	...	...	...	...	...	...
23	Red River	2	2	...	...	...	...	...	...	...
24	Reeves	17	17	...	...	...	...	...	...	...
25	Refugio	56	56	...	...	...	...	...	...	...
26	Roberts	8	8	...	...	...	...	...	...	...
27	Robertson	3	3	...	...	...	...	...	...	...
28	Runnels	75	75	...	...	...	...	...	...	...
29	Rusk	201	200	1	...	...	...	...	...	...
30	San Jacinto	10	10	...	...	...	...	...	...	...
31	San Patricio	102	102	...	...	...	...	...	...	...
32	Schleicher	30	30	...	...	...	...	...	...	...
33	Scurry	94	94	...	...	...	...	...	...	...
34	Shackleford	98	98	...	...	...	...	...	...	...
35	Shelby	6	6	...	...	...	...	...	...	...
36	Sherman	2	2	...	...	...	...	...	...	...
37	Smith	51	51	...	...	...	...	...	...	...
38	Starr	55	52	3	...	...	...	...	...	...
39	Stephens	39	39	...	...	...	...	...	...	...
40	Sterling	15	15	...	...	...	...	...	...	...
41	Stonewall	63	63	...	...	...	...	...	...	...
42	Sutton	9	9	...	...	...	...	...	...	...
43	Tarrant	50	48	2	...	...	...	...	1	...
44	Taylor	87	86	1	...	...	...	...	...	...
45	Terry	32	32	...	...	...	...	...	...	...
46	Throckmorton	70	70	...	...	...	...	...	...	...
47	Titus	20	20	...	...	...	...	...	...	...
48	Tom Green	34	34	...	...	...	...	...	...	...
49	Travis	12	10	2	...	...	...	...	...	...
50	Trinity	2	2	...	...	...	...	...	...	...
51	Tyler	8	8	...	...	...	...	...	...	...
52	Upshur	46	46	...	...	...	...	...	...	...
53	Upton	115	115	...	...	...	...	...	...	...
54	Uvalde	3	3	...	...	...	...	...	...	...
55	Val Verde	3	3	...	...	...	...	...	...	...
56	Van Zandt	15	15	...	...	...	...	...	...	...
57	Victoria	72	72	...	...	...	...	...	...	...
58	Walker	7	7	...	...	...	...	...	...	...
59	Waller	6	6	...	...	...	...	...	...	...
60	Ward	73	73	...	...	...	...	...	...	...
61	Washington	5	5	...	...	...	...	...	...	...
62	Webb	48	48	...	...	...	...	...	...	...
63	Wharton	80	80	...	...	...	...	...	...	...
64	Wheeler	39	39	...	...	...	...	...	...	...
65	Wichita	273	273	...	...	...	...	...	...	...
66	Wilbarger	72	72	...	...	...	...	...	...	...
67	Willacy	13	13	...	...	...	...	...	...	...
68	Williamson	15	11	4	...	...	...	...	...	...
69	Wilson	13	12	1	...	...	...	...	...	...
70	Winkler	76	76	...	...	...	...	...	...	...
71	Wise	31	30	1	...	...	...	...	...	...
72	Wood	110	110	...	...	...	...	...	...	...
73	Yoakum	84	84	...	...	...	...	...	...	...
74	Young	203	203	...	...	...	...	...	...	...
75	Zapata	14	14	...	...	...	...	...	...	...
76	Zavala	3	3	...	...	...	...	...	...	...
77	Offshore	7	7	...	...	...	...	...	...	...

See footnotes at end of table.

BY INDUSTRY AND COUNTY: 1954—Continued

of establishments; for operations classified in the manufacturing including a mine or quarry)

Crude petroleum and natural gas extraction				Nonmetallic minerals (except fuels) mining											
				Dimension stone					Crushed and broken stone						
				Limestone		Granite			Limestone						
Crude petroleum and Natural gas[1]	Natural gas liquids: Natural gasoline	Natural gas liquids: Cycle condensate	Oil and gas field contract services[2]	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Sandstone	Classified in mineral industries	Included in manufactures	Marble	Trap rock	Sandstone	Stone, n.e.c.	
32	...	...		...	...	...	...	...	...	...	...	...	...	...	1
115	1	...		...	...	...	...	...	...	...	...	...	...	...	2
54	2	1		...	...	...	...	...	...	...	...	...	...	...	3
8	7	...		...	...	...	...	...	...	...	...	...	...	...	4
...	...	...		...	...	...	...	...	...	...	...	...	...	...	5
...	...	...		...	...	...	...	...	...	...	...	...	...	...	6
2	...	...		...	...	...	...	...	...	...	...	...	...	...	7
36	...	...		...	...	...	...	...	...	...	...	...	...	...	8
13	...	...		...	...	...	...	...	...	...	...	...	...	...	9
44	3	...		...	...	...	...	...	...	1	...	...	...	...	10
112	7	6		...	...	...	...	...	1	1	...	...	...	...	11
2	...	...		...	...	...	...	...	...	...	...	...	...	...	12
...	...	...		...	...	...	...	...	...	...	...	...	...	...	13
27	...	...		...	...	...	...	...	...	...	...	...	...	...	14
20	2	...		...	...	...	...	...	...	...	...	...	...	...	15
32	5	1		...	...	...	...	...	...	...	...	...	...	...	16
8	1	...		...	...	...	...	1	...	...	...	...	...	...	17
137	1	...		...	...	...	...	...	...	...	...	...	...	...	18
31	...	...		...	...	...	...	...	...	...	...	...	...	...	19
15	2	...		...	...	...	...	...	...	...	...	...	...	...	20
2	...	...		...	...	...	...	...	...	...	...	...	...	...	21
56	2	...		...	...	...	...	...	...	...	...	...	...	...	22
2	...	...		...	...	...	...	...	...	...	...	...	...	...	23
13	1	...		...	...	...	...	...	...	...	...	...	...	...	24
53	3	...		...	...	...	...	...	...	...	...	...	...	...	25
8	...	...		...	...	...	...	...	...	...	...	...	...	...	26
2	...	...		...	...	...	...	...	...	...	...	...	...	...	27
72	3	...		...	...	...	...	...	...	...	...	...	...	...	28
195	5	...		...	...	...	...	...	...	...	...	...	...	...	29
9	...	...		...	...	...	...	...	...	...	...	...	...	...	30
98	1	1		...	...	...	...	...	1	...	...	...	...	...	31
30	...	...		...	...	...	...	...	...	...	...	...	...	...	32
88	4	...		...	...	...	...	...	...	...	...	...	...	...	33
95	2	...		...	...	...	...	...	...	...	...	...	...	...	34
6	...	...		...	...	...	...	...	...	...	...	...	...	...	35
2	...	...		...	...	...	...	...	...	...	...	...	...	...	36
47	1	1		...	...	...	...	...	...	...	...	...	...	...	37
49	2	...		...	...	...	...	...	...	...	...	...	...	...	38
34	4	...	(NA)	...	...	...	...	...	...	...	...	...	1	...	39
15	...	...		...	...	...	...	...	...	...	...	...	...	...	40
61	1	...		...	...	...	...	...	...	...	...	...	...	...	41
9	...	...		...	...	...	...	...	...	...	...	...	...	...	42
33	...	...		...	...	...	...	...	...	1	...	...	...	...	43
81	1	...		...	...	...	...	...	...	...	...	...	...	...	44
32	...	...		...	...	...	...	...	...	...	...	...	...	...	45
70	...	...		...	...	...	...	...	...	...	...	...	...	...	46
20	...	...		...	...	...	...	...	...	...	...	...	...	...	47
33	1	...		...	...	...	...	...	...	...	...	...	...	...	48
4	...	...		...	1	...	...	...	2	1	1	...	...	...	49
1	...	...		...	...	...	...	...	...	...	...	...	...	...	50
7	1	...		...	...	...	...	...	...	...	...	...	...	...	51
45	...	...		...	...	...	...	...	...	...	...	...	...	...	52
111	4	...		...	...	...	...	...	...	...	...	...	...	...	53
1	...	...		...	...	...	...	...	...	...	...	...	...	...	54
2	...	...		...	...	...	...	...	...	...	...	...	...	...	55
14	1	...		...	...	...	...	...	...	...	...	...	...	...	56
70	...	...		...	...	...	...	...	...	...	...	...	...	...	57
4	...	...		...	...	...	...	...	...	...	...	...	...	...	58
5	...	1		...	...	...	...	...	...	...	...	...	...	...	59
68	3	...		...	...	...	...	...	...	...	...	...	...	...	60
5	...	...		...	...	...	...	...	...	...	...	...	...	...	61
47	...	...		...	...	...	...	...	...	...	...	...	...	...	62
78	1	...		...	...	...	...	...	...	...	...	...	...	...	63
37	2	...		...	...	...	...	...	...	...	...	...	...	...	64
264	6	...		...	...	...	...	...	...	...	...	...	...	1	65
70	2	...		...	...	...	...	...	...	...	...	...	...	...	66
13	...	...		...	...	...	...	...	...	...	...	...	...	...	67
7	...	...		1	2	...	...	...	2	2	...	...	...	...	68
12	...	...		...	...	...	...	...	...	...	...	...	...	...	69
71	5	...		...	...	...	...	...	...	...	...	...	...	...	70
26	1	...		...	...	...	...	...	3	...	...	...	...	...	71
108	2	...		...	...	...	...	...	...	...	...	...	...	...	72
83	1	...		...	...	...	...	...	...	...	...	...	...	...	73
199	4	...		...	...	...	...	...	...	...	...	...	...	...	74
14	...	...		...	...	...	...	...	...	...	...	...	...	...	75
2	...	...		...	...	...	...	...	...	...	...	...	...	...	76
7	...	...		...	...	...	...	...	...	...	...	...	...	...	77

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number industries represents number of establishments

	State and county	Nonmetallic minerals (except fuels) mining—Continued										
		Sand and gravel			Clay, ceramic, and refractory minerals							
						Fire clay					Clay, ceramic, and refractory minerals, n.e.c.	
		Common sand and gravel	Glass sand	Foundry sand	Bentonite	Classified in mineral industries	Included in manufactures	Fuller's earth	Kaolin and ball clay (included in manufactures)	Feldspar	Classified in mineral industries	Included in manufactures
1	Mitchell	...	...	...	...	...	...	...	...	...		...
2	Montague	1	...	...	...	...	...	...	...	...	...	...
3	Montgomery	...	...	...	...	...	...	...	...	...	...	...
4	Moore	...	...	...	...	...	...	...	...	...	...	...
5	Morris	...	...	...	...	...	...	...	...	...	...	...
6	Motley	1	...	...	...	...	...	...	...	...	...	...
7	Nacogdoches	...	...	...	...	...	...	...	...	...	...	1
8	Navarro	1	...	...	...	...	...	...	...	...	...	1
9	Newton	...	...	...	...	...	...	...	...	...	...	...
10	Nolan	2	...	...	...	...	...	...	...	...	...	1
11	Nueces	2	...	...	...	...	...	...	...	...	...	1
12	Ochiltree	...	...	...	...	...	...	...	...	...	...	...
13	Oldham	2	...	...	...	...	...	...	...	...	...	...
14	Orange	...	...	...	...	...	...	...	...	...	...	...
15	Palo Pinto	1	...	1	...	...	...	...	...	...	2	1
16	Panola	...	...	...	...	...	...	...	...	...	...	...
17	Parker	1	...	...	...	...	...	...	...	...	...	1
18	Pecos	2	...	...	...	...	...	...	...	...	...	...
19	Polk	...	...	...	...	...	...	...	...	...	...	...
20	Potter	2	...	...	...	...	...	...	...	...	...	...
21	Presidio	...	...	...	...	...	...	...	...	...	...	...
22	Reagan	...	...	...	...	...	...	...	...	...	...	...
23	Red River	...	...	...	...	...	...	...	...	...	...	...
24	Reeves	3	...	...	...	...	...	...	...	...	...	...
25	Refugio	...	...	...	...	...	...	...	...	...	...	...
26	Roberts	...	...	...	...	...	...	...	...	...	...	...
27	Robertson	1	...	...	...	...	...	...	...	...	...	...
28	Runnels	...	...	...	...	...	...	...	...	...	...	...
29	Rusk	...	...	...	...	...	...	...	1	...	...	...
30	San Jacinto	1	...	...	...	...	...	...	...	...	...	...
31	San Patricio	1	...	...	...	...	...	...	...	...	...	...
32	Schleicher	...	...	...	...	...	...	...	...	...	...	...
33	Scurry	2	...	...	...	...	...	...	...	...	...	...
34	Shackleford	1	...	...	...	...	...	...	...	...	...	...
35	Shelby	...	...	...	...	...	...	...	...	...	...	...
36	Sherman	...	...	...	...	...	...	...	...	...	...	...
37	Smith	1	...	...	...	1	...	...	...	...	...	...
38	Starr	...	...	...	...	...	...	...	...	...	...	3
39	Stephens	...	...	...	...	...	...	...	...	...	...	...
40	Sterling	...	...	...	...	...	...	...	...	...	...	...
41	Stonewall	1	...	...	...	...	...	...	...	...	...	...
42	Sutton	...	...	...	...	...	...	...	...	...	...	...
43	Tarrant	13	1	...	...	...	...	...	...	...	...	1
44	Taylor	3	1	...	...	...	...	...	...	...	...	1
45	Terry	...	...	...	...	...	...	...	...	...	...	...
46	Throckmorton	...	...	...	...	...	...	...	...	...	...	...
47	Titus	...	...	...	...	...	...	...	...	...	...	...
48	Tom Green	...	...	...	...	...	...	...	...	...	...	...
49	Travis	1	...	...	...	...	...	...	...	...	...	...
50	Trinity	...	...	...	...	...	...	1	...	...	...	...
51	Tyler	...	...	...	...	...	...	...	...	...	...	...
52	Upshur	...	...	1	...	...	...	...	...	...	...	...
53	Upton	...	...	...	...	...	...	...	...	...	...	...
54	Uvalde	...	...	...	...	...	...	...	...	...	...	...
55	Val Verde	1	...	...	...	...	...	...	...	...	...	...
56	Van Zandt	...	...	...	...	...	...	...	...	...	...	...
57	Victoria	2	...	...	...	...	...	...	...	...	...	...
58	Walker	...	...	...	1	...	...	1	...	...	...	...
59	Waller	...	...	...	...	...	...	...	...	...	...	...
60	Ward	1	...	...	...	...	...	...	...	...	...	...
61	Washington	...	...	...	...	...	...	...	...	...	...	...
62	Webb	...	...	...	...	...	...	...	...	...	1	...
63	Wharton	...	...	...	...	...	...	...	...	...	...	...
64	Wheeler	...	...	...	...	...	...	...	...	...	...	...
65	Wichita	2	...	...	...	...	...	...	...	...	...	...
66	Wilbarger	...	...	...	...	...	...	...	...	...	...	...
67	Willacy	...	...	...	...	...	...	...	...	...	...	...
68	Williamson	1	...	...	...	...	...	...	...	...	...	...
69	Wilson	...	...	...	...	...	...	...	...	...	...	1
70	Winkler	...	...	...	...	...	...	...	...	...	...	...
71	Wise	...	...	...	...	...	...	...	...	...	...	1
72	Wood	...	...	...	...	...	...	...	...	...	...	...
73	Yoakum	...	...	...	...	...	...	...	...	...	...	...
74	Young	...	...	...	...	...	...	...	...	...	...	...
75	Zapata	...	...	...	...	...	...	...	...	...	...	...
76	Zavala	1	...	...	...	...	...	...	...	...	...	...
77	Offshore	...	...	...	...	...	...	...	...	...	...	...

[1]See table 3, footnote 4, and for counties, footnote 7. [2]See table 3, footnote 5.

BY INDUSTRY AND COUNTY: 1954—Continued

of establishments; for operations classified in the manufacturing including a mine or quarry)

Nonmetallic minerals (except fuels) mining—Continued													
Natural abrasive stones	Chemical and fertilizer mineral mining				Non-metallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels) mining							
	Potash, soda, and borate minerals	Rock salt	Sulfur	Chemical and fertilizer mineral mining, n.e.c.		Gypsum		Native asphalt and bitumens	Pumice and pumicite	Talc, soapstone, and pyro-phyllite	Peat	Non-metallic minerals, n.e.c.	
						Classified in mineral industries	Included in manu-factures						
...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	...	...	...	...	...	1	...	...	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	...	...	...	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	1	...	...	...	...	...	10
...	...	...	...	...	...	...	...	...	...	...	...	...	11
...	...	...	...	...	...	...	...	...	...	...	...	...	12
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...	...	...	...	...	...	...	...	...	...	...	...	...	14
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Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Texas, all mineral operations:												
Including operations classified in manufactures	5,345	469	2,056	889	750	743	267	113	34	13	6	5
Mineral industries only	5,264	464	2,031	876	731	727	264	113	34	13	6	5
Metal mining, total	11	1	5	1	...	3	...	...	1	..	...	...
Iron ores	5	...	2	...	...	2	...	...	1	...	...	...
Copper ores	1	1	...	...	...	...	...	...	...	...	...	...
Lead and zinc ores	1	...	1	...	...	...	...	...	...	...	...	...
Silver ores	1	...	1	...	...	...	...	...	...	...	...	...
Metal mining contract services	3	...	1	1	...	1	...	...	...	...	...	...
Lignite	2	...	...	...	...	1	1	...	...	...	...	...
Crude petroleum and natural gas extraction, total	4,986	438	1,942	827	694	675	251	104	32	12	6	5
Crude petroleum and natural gas	2,837	413	1,454	418	242	187	60	34	15	7	4	3
Natural gas liquids	231	3	16	20	49	96	38	8	1	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	889	6	133	167	217	220	102	39	3	2	...	...
Building, repairing, and dismantling rigs and derricks	48	...	6	16	11	12	3	...	...	...	...	...
Oil and gas field contract services, n.e.c	981	16	333	206	175	160	48	23	13	3	2	2
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	346	30	109	61	56	64	15	9	1	1	...	...
Mineral industries only	265	25	84	48	37	48	12	9	1	1	...	...
Dimension stone:												
Limestone:												
Classified in mineral industries	3	...	1	2	...	...	...	...	...	...	...	...
Included in manufactures	5	...	...	1	1	2	1	...	...	...	...	...
Granite:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	...	...	...	1	1	...	...	...	...	...
Sandstone	2	...	1	1	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	22	1	3	3	5	7	1	2	...	...	...	...
Included in manufactures and wholesale trade	21	3	2	...	9	6	1	...	...	...	...	...
Marble	1	...	...	...	...	1	...	...	...	...	...	...
Trap rock	1	...	...	...	...	1	...	...	...	...	...	...
Sandstone	1	...	...	...	1	...	...	...	...	...	...	...
Stone, n.e.c	4	...	2	1	1	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	153	11	50	33	21	30	6	2	...	...	...	...
Glass sand	5	1	2	...	1	1	...	...	...	...	...	...
Foundry sand	6	...	3	2	1	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	7	2	1	...	1	3	...	...	...	...	...	...
Fire clay:												
Classified in mineral industries	6	2	2	2	...	...	...	...	...	...	...	...
Included in manufactures	8	2	1	2	1	2	...	...	...	...	...	...
Fuller's earth	4	...	4	...	...	...	...	...	...	...	...	...
Kaolin and ball clay (included in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Feldspar	2	1	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	10	3	5	...	...	2	...	...	...	...	...	...
Included in manufactures	40	...	21	10	6	3	...	...	...	...	...	...
Natural abrasive stones	1	1	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Potash, soda, and borate minerals	1	...	...	...	...	1	...	...	...	...	...	...
Rock salt	1	...	...	...	...	...	1	...	...	...	...	...
Sulfur	10	1	...	...	...	...	2	5	1	1	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954—Continued

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Texas, all mineral operations--Con.												
Nonmetallic minerals (except fuels) mining--Continued												
Chemical and fertilizer mineral mining--Continued												
Chemical and fertilizer mineral mining, n.e.c.	6	...	3	...	2	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	7	...	3	2	2	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels) mining:												
Gypsum:												
Classified in mineral industries	2	...	1	1	...	...	...	...	...	...	...	...
Included in manufactures	4	...	...	...	2	2	...	...	...	...	...	...
Native asphalt and bitumens	2	...	...	...	...	...	2	...	...	...	...	...
Pumice and pumicite	3	2	...	...	1	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	1	...	...	...	...	1	...	...	...	...	...	...
Peat	1	...	...	1	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c.	2	...	1	...	1	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water): Million gallons	Water intake (except mine water): Million gallons per production worker[3]	Water intake (except mine water): Gallons per dollar value added	Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons): Used	Mine water (mil. gallons): Drained and discharged	Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]: Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Texas, total	100,455	3,533,064	80,802	0.80	23	84,077	875	167	617,020	7	13	67	13
Metal mining and Lignite mining.	443	8,723	6,327	14.28	724	5,489	...	20	9,781	...	99	...	1
Crude petroleum and natural gas extraction, total	94,485	[4]3,415,084	54,147	0.57	16	58,658	xxx	xxx	[5]575,392	3	4	85	8
Crude petroleum and Natural gas	35,663	2,623,155	27,085	0.76	10	51,621	xxx	xxx	(NA)	([6])	2	87	[7]11
Natural gas liquids	6,733	([4])	22,292	3.31	(NA)	5,573	xxx	xxx	543,537				...
Oil and gas field contract services:													
Drilling oil and gas wells	23,657	240,625	4,426	0.19	18	548	xxx	xxx	(NA)	6	17	52	[7]25
Building, repairing, and dismantling rigs and derricks	807	4,058	1	([8])	([8])	10	xxx	xxx	(NA)	100	...	...	...
Oil and gas field contract services, n.e.c	27,625	329,881	343	0.01	1	906	xxx	xxx	(NA)	25	11	2	62
Nonmetallic minerals (except fuels) mining, total	5,527	109,257	20,328	3.68	186	19,930	875	147	31,847	18	12	37	33
Dimension stone	24	76	1	0.04	13	1			1	...	...	100	...
Crushed and broken stone:													
Limestone	625	5,428	108	0.17	20	35	53	52	970	55	...	17	28
Other crushed and broken stone	77	634	...	...	...	...	...	...	...	...	...		
Sand and gravel:													
Common sand and gravel	2,185	17,394	6,844	3.13	393	6,603	424	...	14,204	1	31	42	[7]26
Glass sand	57	463	...	...	...	...	125	...	138	...	...	...	...
Foundry sand	33	145	47	1.42	324	42	135	...	182	...	11	...	[7]89
Clay, ceramic, and refractory minerals	164	2,029	11	0.07	5	11	...	92	11	100	...	...	...
Chemical and fertilizer mineral mining	2,093	80,733	12,358	5.90	153	12,279	...	...	15,244	28	...	35	37
Other nonmetallic minerals (except fuels) mining	269	2,355	959	3.57	407	959	138	3	1,097		100		

NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 11,159 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]See table 2, footnote 6.
[5]For industries other than Natural gas liquids, includes water intake only.
[6]Less than 0.5 percent.
[7]Includes "not specified" as follows: for Crude petroleum and Natural gas, 4 percent; for Drilling oil and gas wells contract services, 18 percent; for Common sand and gravel, 17 percent; and for Foundry sand 64 percent.
[8]Less than one-half of the units of measure specified.

UTAH

143-1

MINING IN UTAH: 1954

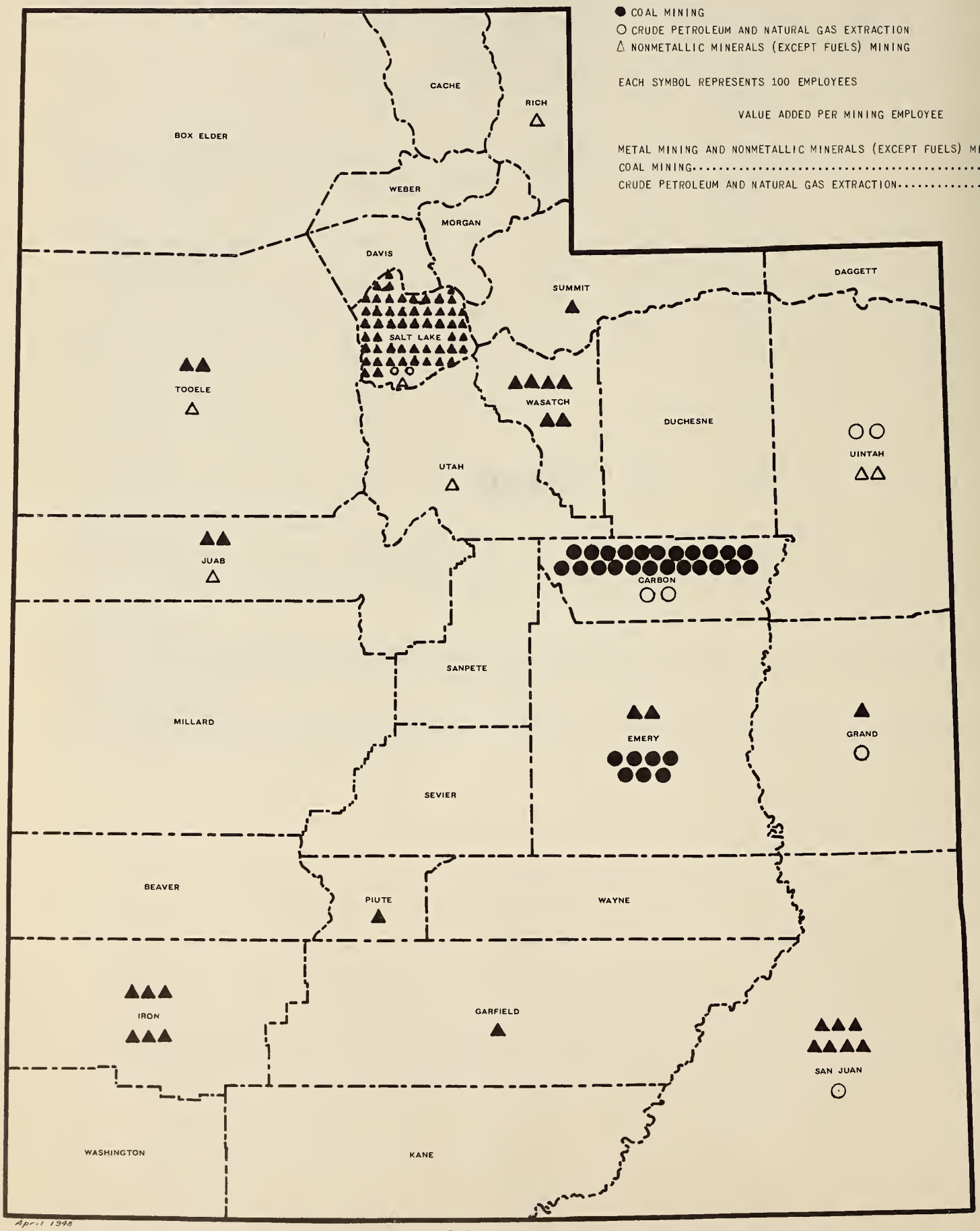
Rank among States:
Employment, 18
Value of shipments, 13

▲ METAL MINING
● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING AND NONMETALLIC MINERALS (EXCEPT FUELS) MINING	$14,400
COAL MINING	7,800
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	1,500



April 1958

SCALE
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Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes common clay and shale and contract service operations)

Item	1954	1939	1929[1]	1919[2]	1909[2]	1902[3]
Number of operating companies	499	173	(NA)	(NA)	[4]499	[4]443
Number of establishments	562	(NA)	186	189	504	(NA)
Number of mines and quarries	478	191	204	202	671	451
Number of oil and gas wells producing at end of year	99	7	(NA)	...	...	...
Number of preparation plants	85	38	(NA)	(NA)	(NA)	(NA)
Value of shipments[5]...$1,000	[6]275,157	63,037	83,098	41,511	22,083	12,378
Value added in mining...do	[6]153,235	51,550	62,829	29,898	16,067	9,873
Number of persons engaged, total	13,137	10,899	13,594	11,246	10,154	7,305
Production and development workers	10,298	9,529	12,607	10,241	9,190	[7]6,678
All other employees	2,387	1,303	[8]958	929	758	627
Proprietors and firm members	452	67	29	76	206	(NA)
Performing manual labor	266	47	(NA)	16	57	(NA)
Man-hours worked by production and development workers...1,000	19,903	18,466	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	188,660	28,101	44,914	31,371	17,176	9,265
Wages of production and development workers...do	43,447	13,274	21,900	17,768	9,849	6,010
Salaries of all other employees...do	13,360	3,340	[8]2,745	1,990	1,311	750
Minerals received for preparation...do	75,609	(NA)	(NA)	298	107	(NA)
Supplies...do	33,425	7,650	14,012	8,609	4,377	2,305
Fuel[9]...do	3,863	574	410	855	1,152	
Purchased electric energy...do	2,391	3,001	3,707	1,233		
Contract work...do	16,565	262	2,140	618	380	200
Purchased machinery installed...do	10,090		4,154	(NA)		
Capital expenditures, total...do	19,438	(NA)	(NA)	(NA)		
Development and exploration of mineral property...do	9,076		8,919	4,864	(NA)	(NA)
Preparation plant construction...do	767	552				
Other construction...do	1,880		(NA)	(NA)		
New machinery and equipment...do	6,577	1,344				
Used plant and equipment...do	1,138	131				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	498	275	184	90	51	16
Per production worker	48	29	15	9	6	2
Prime movers...1,000	295	17	6	32	40	15
Electric motors driven by purchased energy...do	203	258	178	58	11	1
Horsepower rating of electric motors driven by energy generated at establishment...do	127	1	(10)	9	12	4
Energy used...million kwh equivalent	3,851	1,346	1,266	(NA)		
Coal[11]...1,000 short tons	44	76	101	199		
Fuel oils...1,000 barrels	137	31	9	4	(NA)	(NA)
Gas[11]...million cu.ft	8,797	849	...	...		
Electric energy purchased...million kwh	267	427	469	(NA)		
Electric energy generated and used...do	394	1	1	(NA)		

NA Not available.

[1]Excludes data for crude petroleum and natural gas extraction operations, if any.

[2]Excludes data for sand and gravel operations and limestone quarries operated as part of cement and lime plants. For 1929, 3 such sand and gravel operations were reported with products valued at $255,000, and 3 such limestone quarries.

[3]Includes data for one cement plant and for lime plants producing lime valued at $99,000.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[6]Excludes data for Uranium-radium-vanadium ores.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[10]Less than one-half of the unit of measure specified.

[11]Includes fuels produced and used for fuel at the same establishment.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Utah, total		Bituminous coal	Crude petroleum and natural gas extraction		
		Including operations classified in manufactures	Mineral industries only		Total	Crude petroleum and Natural gas	Oil and gas field contract services
1	Number of operating companies	499	493	48	55	42	14
2	Number of establishments	562	555	54	56	42	14
	Number of mines, quarries, and producing oil and gas wells:						
3	1954	577	570	55	99	96	3
4	1939	198	(NA)	51	7	7	...
5	Number of preparation plants	85	85	4	...	xxx	xxx
	Value of shipments:[1]						
6	1954 ..... $1,000	[2]275,157	[2]273,486	32,924	9,064	6,650	2,414
7	1939 ..... do	63,037	(NA)	7,025	([3])	([3])	...
8	Value added in mining ..... do	[2]153,235	[2]151,662	24,020	1,127	([5])	1,191
9	Number of persons engaged, total	13,137	13,088	3,145	789	588	201
10	Production and development workers	10,298	10,249	2,735	490	315	175
11	All other employees	2,387	2,387	356	265	254	11
12	Proprietors and firm members	452	452	54	34	19	15
13	Performing manual labor	266	266	43	12	4	8
	Man-hours worked by production and development workers:						
14	1954 1,000	19,903	19,806	4,351	993	624	369
15	1939 ..... do	18,466	(NA)	3,513	([3])	([3])	...
	At mines:						
16	Underground ..... do	6,892	6,892	3,249	xxx	xxx	xxx
17	Open-pit ..... do	5,086	4,989	...	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.) ..... do	3,586	3,586	1,102	xxx	xxx	xxx
19	At preparation plants ..... do	3,346	3,346	...	xxx	xxx	xxx
20	At oil and gas field operations ..... do	993	993	xxx	993	624	369
21	Man-hours spent on development and exploration work (included above) ..... do	2,471	2,471	11	902	536	366
22	Principal expenses designated below, total $1,000	188,660	188,375	21,005	16,682	14,571	2,111
23	Wages of production and development workers ..... do	43,447	43,260	10,533	2,411	1,578	833
24	Salaries of all other employees ..... do	13,360	13,360	2,188	1,442	1,385	57
25	Minerals received for preparation ..... do	75,609	75,609	} 7,070	{ xxx	xxx	xxx
26	Supplies ..... do	[6]33,425	33,327	}	{ 4,956	3,912	1,044
	Purchased fuel:						
27	Coal ..... do	[6]215	215	...	...	...	...
28	Fuel oils ..... do	[6]704	704	32	40	19	21
29	Gas ..... do	[6]1,720	1,720	...	...	...	...
30	Other fuels ..... do	[6]1,224	1,224	72	388	317	71
31	Purchased electric energy ..... do	[6]2,391	2,391	814	3	3	...
32	Contract work ..... do	[6]16,565	16,565	296	7,442	7,357	85
33	Purchased machinery installed ..... do	[7]10,090	10,090	2,309	1,205	857	348
34	Capital expenditures, total ..... do	[7]19,438	19,438	1,689	6,097	5,751	346
35	Development and exploration of mineral property ..... do	[7]9,076	9,076	62	5,093	5,093	...
36	Preparation plant construction ..... do	[7]767	767	5	xxx	xxx	xxx
37	Other construction ..... do	[7]1,880	1,880	77	264	264	...
38	New machinery and equipment ..... do	[7]6,577	6,577	1,330	645	394	251
39	Used plant and equipment ..... do	[7]1,138	1,138	215	95	...	95
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[7]498	498	96	24	24	...
41	Per production worker	48	49	35	49	76	...
42	Prime movers 1,000	[7]295	295	19	24	24	...
43	Electric motors driven by purchased energy ..... do	[7]203	203	77	([9])	([9])	...
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	[7]127	127	1	1	1	...
45	Energy used ..... million kwh equivalent	[7]3,851	3,851	229	256	231	25
	Produced and used for fuel:						
46	Coal ..... 1,000 short tons	16	16	16	xxx	xxx	xxx
47	Natural gas ..... million cu. ft.	450	450	xxx	450	450	...
	Fuel purchased:						
48	Coal ..... 1,000 short tons	[7]28	28	...	...	...	...
49	Fuel oil ..... 1,000 barrels	[7]137	137	8	12	8	4
50	Gas ..... million cu. ft.	[7]8,347	8,347	...	...	...	...
51	Electric energy purchased ..... million kwh	[7]267	267	75	([9])	([9])	...
52	Electric energy generated and used ..... do	[7]394	394	1	5	5	...
53	Water intake, including mine water used ..... million gallons	[7]21,461	21,461	244	54	53	1
54	Per production worker ..... do	2.08	2.09	0.09	0.11	0.17	0.01

NA Not available. xxx Not applicable. [1]See table 1, footnote 5. [2]See table 1, footnote 6. [3]Figures for the Crude petroleum and Natural gas industries, for 1 producing operation in the Crushed and broken stone industries and for 1 producing operation in the Clay, ceramic, and refractory minerals industries and for 3 nonproducing lead ores mines, and 1 nonproducing silver ores mine are included with those for "Other industries." For "Other industries," see also footnote 4. [4]Figures for 2 copper ores mines are included with those for iron ores. [5]Not shown since the cost of supplies, purchased fuels, purchased electric energy, contract work, and purchased machinery exceeds the value of shipments plus

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS: 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Metal mining and Nonmetallic minerals (except fuels) mining												
Total		Iron ores	Lead and zinc ores	Silver ores	Uranium-radium-vanadium ores	Crushed and broken stone		Sand and gravel	Clay, ceramic, and refractory minerals		Other industries (including operations classified in manufactures)	
Including operations classified in manufactures	Mineral industries only					All stone (including operations classified in manufactures)	Limestone (mineral industries only)		All clay (including operations classified in manufactures)	Clay, ceramic, and refractory minerals, n.e.c. (mineral industries only)		
398	392	4	29	9	212	14	7	40	13	6	94	1
452	445	7	37	11	221	14	7	43	17	8	102	2
423	416	7	34	11	221	14	7	43	17	8	76	3
140	(NA)	2	27	23	3	11	(NA)	9	9	(NA)	56	4
81	81	...	5	...	1	6	6	42	4	1	21	5
[2]233,169	[2]231,498	19,357	28,702	341	(NA)	1,508	889	1,748	2,007	203	179,506	6
[3]56,012	(NA)	[4]38,636	9,970	2,608	146	[3]215	(NA)	209	[3]66	(NA)	[3]4,162	7
[2]128,088	[2]126,515	13,201	13,512	260	(NA)	1,235	702	1,409	1,522	86	96,949	8
9,203	9,154	426	1,701	55	1,081	157	121	206	111	16	5,466	9
7,073	7,024	312	1,334	50	772	114	81	146	90	7	4,255	10
1,766	1,766	112	352	4	109	36	36	15	11	...	1,127	11
364	364	2	15	1	200	7	4	45	10	9	84	12
211	211	...	9	...	103	5	3	27	6	6	61	13
14,559	14,462	615	2,857	95	1,599	240	175	281	161	11	8,711	14
[3]14,953	(NA)	[4]7,318	[3]3,851	[3]1,857	98	[3]144	(NA)	122	[3]63	(NA)	[3]1,500	15
3,643	3,643	...	2,170	63	953	...	...	...	113	...	344	16
5,086	4,989	430	9	16	100	147	84	117	21	7	4,246	17
2,484	2,484	185	486	16	546	38	38	(NA)	11	...	1,202	18
3,346	3,346	...	192	...	...	55	53	164	16	4	2,919	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
1,558	1,558	241	89	33	562	5	5	2	1	...	625	21
150,973	150,688	7,572	23,000	368	8,956	842	621	936	888	132	108,411	22
30,503	30,316	1,344	5,543	158	3,221	453	319	520	362	14	18,902	23
9,730	9,730	675	2,200	9	471	95	95	49	45	...	6,186	24
[6]97,008	96,910	...	11,470	...	(NA)	...	...	(NA)	...	...	[6]79,638	25
		1,247	2,388	62	1,632	[6]202	144	214	[6]155	3		26
[6]215	215	3	51	...	43	[6]2	2	...	[6]1	...	[6]115	27
[6]632	632	181	9	2	161	[6]15	14	27	[6]2	...	[6]235	28
[6]1,720	1,720	...	1	...	16	...	...	...	...	...	[6]1,703	29
[6]764	764	28	16	8	257	[6]21	16	74	[6]8	3	[6]352	30
[6]1,574	1,574	135	774	16	54	[6]32	31	42	[6]13	...	[6]508	31
[6]8,827	8,827	3,959	548	113	3,101	[6]22	...	10	[6]302	112	[6]772	32
[7]6,576	6,576	900	290	11	2,253	[7]38	15	282	[7]17	...	[7]2,785	33
[7]11,652	11,652	297	357	131	6,934	[7]59	35	310	[7]13	1	[7]3,551	34
[7]3,921	3,921	...	63	120	3,419	[7]7	7	9	[7]2	1	[7]301	35
[7]762	762	...	...	...	384	...	...	52	...	...	[7]326	36
[7]1,539	1,539	13	10	...	927	[7]14	13	2	...	...	[7]573	37
[7]4,602	4,602	278	218	4	1,714	[7]36	14	122	[7]11	...	[7]2,219	38
[7]828	828	6	66	7	490	[7]2	1	125	...	...	[7]132	39
[7]378	378	33	84	5	54	[7]10	10	20	[7]1	1	[7]171	40
53	54	104	63	98	70	88	129	138	11	([8])	40	41
[7]252	252	27	9	2	52	[7]9	9	17	[7]1	1	[7]135	42
[7]126	126	6	75	3	2	[7]1	1	3	...	...	[7]36	43
[7]126	126	3	...	([9])	1	...	...	...	...	...	[7]122	44
[7]3,366	3,366	68	135	4	184	[7]12	11	30	2	1	[7]2,927	45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
[7]28	28	([9])	6	([9])	6	([9])	([9])	...	([9])	...	[7]16	48
[7]117	117	32	2	([9])	30	[7]3	3	6	([9])	...	[7]43	49
[7]8,347	8,347	...	11	...	59	...	...	...	...	...	[7]8,277	50
[7]192	192	6	79	1	6	[7]2	2	2	([9])	...	[7]96	51
[7]388	388	2	...	...	2	...	...	...	...	...	[7]384	52
[7]21,163	21,163	18	2,361	3	11	[7]4	4	188	[7]1	...	[7]18,577	53
2.99	3.01	0.06	1.77	0.06	0.01	0.04	0.05	1.29	0.01	...	4.37	54

capital expenditures. [6]Figures for fuels, electric energy, and contract work for crushed stone, clay, and gypsum operations classified in manufactures are included with figures for supplies. [7]Excludes figures for crushed stone, clay, and gypsum operations classified in manufactures. [8]Not computed since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers. [9]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Utah, all mineral operations:									
Including operations in manufactures	562	[2]275,157	[2]152,652	10,298	2,387	19,903	43,447	13,360	[3]18,300
Mineral industries only:									
Including crude petroleum and natural gas extraction	555	273,486	151,079	10,249	2,387	19,806	43,260	13,360	18,300
Excluding crude petroleum and natural gas extraction	499	264,422	149,952	9,759	2,122	18,813	40,849	11,918	12,298
Bituminous coal	54	32,924	24,020	2,735	356	4,351	10,533	2,188	1,474
Crude petroleum and natural gas extraction, total	56	9,064	1,127	490	265	993	2,411	1,442	6,002
Crude petroleum and natural gas[4]	42	6,650	([5])	315	254	624	1,578	1,385	5,751
Oil and gas field contract services[6]	14	2,414	1,191	175	11	369	833	57	251
Metal mining and Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	452	[2]233,169	[2]127,505	7,073	1,766	14,559	30,503	9,730	[3]10,824
Mineral industries only	445	[2]231,498	[2]125,932	7,024	1,766	14,462	30,316	9,730	10,824
Iron ores	7	19,357	13,201	312	112	615	1,344	675	291
Lead and zinc ores	37	28,702	13,512	1,334	352	2,857	5,543	2,200	291
Silver ores	11	341	260	50	4	95	158	9	124
Uranium-radium-vanadium ores	221	(NA)	(NA)	772	109	1,599	3,221	471	6,444
Crushed and broken stone (including operations in manufactures)	14	1,508	1,235	114	36	240	453	95	[3]57
Sand and gravel	43	1,748	1,409	146	15	281	520	49	185
Clay, ceramic, and refractory minerals (including operations in manufactures)	17	2,007	1,522	90	11	161	362	45	[3]13
Other industries (including operations in manufactures)	102	179,506	96,949	4,255	1,127	8,711	18,902	6,186	[3]3,419
COUNTY									
Cache	4	164	132	12	1	19	34	1	...
Carbon	30	(NA)	(NA)	[7]2,460	([7])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	26	25,688	18,169	2,088	254	3,316	8,087	1,610	1,079
Davis	6	[8]327	[8]257	[7]27	([7])	[8]56	[8]120	[8]9	[8]18
Emery	57	[2] [9]7,071	[2] [9]5,661	[7]881	([7])	[9]1,249	[9]2,900	[9]606	[9]1,197
Bituminous coal mining	20	6,788	5,477	602	93	938	2,293	529	393
Garfield	16	(NA)	(NA)	52	5	86	175	14	203
Grand, total	49	(NA)	(NA)	[7]164	([7])	(NA)	(NA)	(NA)	(NA)
Metal mining	46	(NA)	(NA)	105	9	181	396	41	685
Crude petroleum and natural gas[10]	3	(NA)	(NA)	[7]50	([7])	(NA)	(NA)	(NA)	(NA)
Iron	16	23,204	14,904	510	126	1,054	2,227	782	694
Metal mining	10	23,012	14,765	484	126	1,003	2,134	782	684
Bituminous coal mining	3	161	119	23	...	44	81	...	...
Juab	26	[2]5,781	[2]4,891	251	21	492	1,068	110	110
Millard	7	148	164	23	2	50	80	3	128
Piute	15	(NA)	(NA)	66	4	155	286	14	374
Rich	3	(D)	(D)	69	1	(D)	(D)	(D)	(D)
Salt Lake (mineral industries only), total	54	(NA)	(NA)	[7]5,507	([7])	(NA)	(NA)	(NA)	(NA)
Metal mining	31	(D)	(D)	4,279	988	(D)	(D)	(D)	(D)
Crude petroleum and natural gas[10]	7	(NA)	(NA)	[7]175	([7])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining (mineral industries only)	16	825	674	59	9	123	196	26	104
San Juan, total	104	(NA)	(NA)	[7]637	([7])	(NA)	(NA)	(NA)	(NA)
Metal mining	97	[2]2,799	[2]1,896	542	60	909	2,425	416	3,590
Crude petroleum and natural gas[10]	7	(NA)	(NA)	[7]35	([7])	(NA)	(NA)	(NA)	(NA)
Sevier (mineral industries only)	8	[2]362	[2]310	24	7	58	86	28	24
Summit	9	[2]725	[2]550	91	19	213	402	120	39
Tooele	23	[2]5,722	[2]2,359	215	88	511	978	329	239

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Uintah:									
Including crude petroleum and natural gas	21	(NA)	(NA)	[7]338	([7])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	10	[2]2,502	[2]2,188	131	33	294	602	281	284
Crude petroleum and natural gas[10]	11	(NA)	(NA)	[7]174	([7])	(NA)	(NA)	(NA)	(NA)
Utah (mineral industries only)	32	[2]885	[2]582	99	11	177	333	78	97
Wasatch	5	(D)	(D)	[7]288	([7])	(D)	(D)	(D)	25
Weber	5	125	99	16	2	19	30	7	3

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. [1]See table 1, footnote 5. [2]See table 1, footnote 6. [3]See table 2, footnote 7. [4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. [5]See table 2, footnote 5. [6]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries. [7]Figures for "All other employees" are included with those for "Production and development workers." [8]Excludes data for 1 Crude petroleum or Natural gas establishments. [9]Excludes data for 2 Crude petroleum or Natural gas establishment. [10]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	All mineral operations			Metal mining						
	Total	Classified in mineral industries	Included in manufactures	Iron ores	Copper ores	Lead and zinc ores	Gold and silver ores		Ferro-alloy ores, except vanadium	
							Lode gold	Silver ores	Manganese ores	Tungsten ores
Utah, total....	562	555	7	7	17	37	9	11	11	21
Beaver.....	13	13	...	...	3	6	...	...	...	1
Box Elder.....	9	9	...	...	...	1	1	...	...	5
Cache.....	4	4	...	...	...	...	...	...	...	...
Carbon.....	31	31	...	...	...	...	...	...	...	...
Daggett.....	2	2	...	...	...	...	...	...	...	...
Davis.....	6	6	...	...	...	...	...	...	...	...
Duchesne.....	6	6	...	...	...	...	1	...	...	...
Emery.....	57	57	...	...	...	...	...	...	...	...
Garfield.....	16	16	...	...	...	...	...	1	...	...
Grand.....	49	49	...	...	1	...	...	...	1	...
Iron.....	16	16	...	7	...	1	...	...	...	...
Juab.....	26	26	...	...	1	5	2	3	4	2
Kane.....	1	1	...	...	...	...	...	...	...	...
Millard.....	7	7	...	...	...	...	...	...	1	6
Morgan.....	2	1	1	...	...	...	...	...	...	...
Piute.....	15	15	...	...	1	1	1	1	...	...
Rich.....	3	3	...	...	...	...	...	...	1	...
Salt Lake.....	57	54	3	...	4	5	1	1	...	3
San Juan.....	104	104	...	...	1	...	...	...	1	...
Sanpete.....	4	4	...	...	...	...	...	...	...	...
Sevier.....	10	8	2	...	...	...	...	...	...	...
Summit.....	9	9	...	...	...	2	1	2	...	...
Tooele.....	23	23	...	...	1	7	1	1	2	4
Uintah.....	21	21	...	...	1	...	...	...	...	...
Utah.....	33	32	1	...	...	9	1	2	1	...
Wasatch.....	5	5	...	...	2	1	...	...	...	...
Washington.....	7	7	...	...	1	...	...	...	...	...
Wayne.....	5	5	...	...	...	...	...	...	...	...
Weber.....	5	5	...	...	1	...	...	...	...	...

State and county	Metal mining—Continued		Bituminous coal	Crude petroleum and natural gas extraction		Nonmetallic minerals (except fuels) mining				
	Metal mining contract services	Uranium-radium-vanadium ores		Crude petroleum and natural gas[1]	Oil and gas field contract services[2]	Dimension sandstone	Crushed and broken stone			
							Limestone		Sandstone	Stone, n.e.c.
							Classified in mineral industries	Included in manufactures		
Utah, total....	17	221	54	42	14	3	7	3	3	1
Beaver.....	...	1	...	1	...	...	...	...	...	...
Box Elder.....	...	...	...	...	...	...	...	...	...	...
Cache.....	...	...	...	...	...	...	1	...	...	...
Carbon.....	...	1	26	4	...	...	...	...	...	...
Daggett.....	...	1	...	1	...	...	...	...	...	...
Davis.....	...	...	...	1	...	...	...	...	...	...
Duchesne.....	...	...	...	2	...	...	...	...	...	...
Emery.....	3	31	20	2	...	...	...	...	...	...
Garfield.....	...	14	1	...	...	...	...	...	...	...
Grand.....	1	43	...	3	...	...	...	...	...	...
Iron.....	2	...	3	...	...	...	...	...	1	1
Juab.....	1	1	...	...	...	...	1	...	1	...
Kane.....	...	...	1	...	...	...	...	...	...	...
Millard.....	...	...	...	...	(NA)	...	...	...	...	...
Morgan.....	...	...	...	...	...	...	...	1	...	...
Piute.....	...	10	...	...	...	...	...	...	...	...
Rich.....	...	...	...	...	...	...	...	...	...	...
Salt Lake.....			...	7	...	...	1	2	...	...
San Juan.....	8	87	...	7	...	...	...	...	...	...
Sanpete.....	...	...	...	...	...	...	...	...	1	...
Sevier.....	...	2	1	...	...	...	...	...	...	...
Summit.....	...	1	1	...	...	1	...	...	...	...
Tooele.....	...	1	...	...	...	...	2	...	...	...
Uintah.....	...	2	1	11	...	...	...	...	...	...
Utah.....	...	3	...	...	...	...	1	...	...	1
Wasatch.....	...	1	...	...	...	...	...	...	...	...
Washington.....	...	2	...	1	...	2	...	...	...	...
Wayne.....	...	5	...	...	...	...	...	...	...	...
Weber.....	...	...	...	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	Nonmetallic minerals (except fuels) mining—Continued								
	Sand and gravel		Clay, ceramic, and refractory minerals					Chemical and fertilizer mineral mining	
						Clay, ceramic, and refractory minerals, n.e.c.			
	Common sand and gravel	Foundry sand	Fire clay	Fuller's earth	Kaolin and ball clay	Classified in mineral industries	Included in manufactures	Fluorspar	Potash, soda, and borate minerals
Utah, total....	40	3	5	1	1	8	2	4	1
Beaver.....	...	...	...	...	...	...	...	1	...
Box Elder.....	2	...	...	...	...	...	...	...	...
Cache.....	3	...	...	...	...	...	...	...	...
Carbon.....	...	...	...	...	...	...	...	...	...
Daggett.....	...	...	...	...	...	...	...	...	...
Davis.....	5	...	...	...	...	...	...	...	...
Duchesne.....	...	...	...	...	...	...	...	...	...
Emery.....	1	...	...	...	...	...	...	...	...
Garfield.....	...	...	...	...	...	...	...	...	...
Grand.....	...	...	...	...	...	...	...	...	...
Iron.....	...	1	...	...	...	...	...	...	...
Juab.....	1	...	...	...	1	...	...	3	...
Kane.....	...	...	...	...	...	...	...	...	...
Millard.....	...	...	...	...	...	...	...	...	...
Morgan.....	...	...	...	...	...	1	...	...	...
Piute.....	...	...	...	...	...	...	...	...	1
Rich.....	...	...	...	...	...	...	...	...	...
Salt Lake.....	14	1	...	...	...	...	1	...	...
San Juan.....	...	...	...	...	...	...	...	...	...
Sanpete.....	1	...	...	...	...	1	...	...	...
Sevier.....	3	...	...	1	...	...	...	...	...
Summit.....	1	...	...	...	...	...	...	...	...
Tooele.....	2	...	...	...	...	1	...	...	1
Uintah.....	...	...	...	...	...	...	...	...	...
Utah.....	3	...	5	...	...	4	1	...	...
Wasatch.....	1	...	...	...	...	...	...	...	...
Washington.....	1	...	...	...	...	...	...	...	...
Wayne.....	...	...	...	...	...	...	...	...	...
Weber.....	3	...	...	...	...	1	...	...	...

State and county	Nonmetallic minerals (except fuels) mining—Continued								
	Chemical and fertilizer mineral mining—Continued				Nonmetallic minerals (except fuels) contract services	Miscellaneous nonmetallic minerals (except fuels)			
	Phosphate rock	Rock salt	Sulfur	Chemical and fertilizer mineral mining, n.e.c.		Gypsum (included in manufactures)	Native asphalt and bitumens	Pumice and pumicite	Nonmetallic minerals, n.e.c.
Utah, total....	2	2	1	1	2	2	6	1	1
Beaver.....	...	...	1	...	...	...	...	...	...
Box Elder.....	...	...	...	...	...	...	...	...	...
Cache.....	...	...	...	...	...	...	...	...	...
Carbon.....	...	...	...	...	...	...	...	...	...
Daggett.....	...	...	...	...	...	...	...	...	...
Davis.....	...	...	...	...	...	...	...	...	...
Duchesne.....	...	...	...	1	...	...	2	...	...
Emery.....	...	...	...	1	...	...	2	...	...
Garfield.....	...	...	...	...	...	...	...	...	...
Grand.....	...	...	...	...	...	...	...	...	...
Iron.....	...	...	...	...	...	...	...	...	...
Juab.....	...	...	...	...	...	...	...	...	...
Kane.....	...	...	...	...	...	...	...	...	...
Millard.....	...	...	...	...	...	...	...	...	...
Morgan.....	...	...	...	...	...	...	...	...	...
Piute.....	...	...	...	...	...	...	...	...	...
Rich.....	2	...	...	...	...	...	...	...	...
Salt Lake.....	...	...	...	...	...	...	...	...	...
San Juan.....	...	...	...	...	...	...	...	...	...
Sanpete.....	1	1	...	...	...	...	...	...	...
Sevier.....	...	1	...	...	...	2	...	...	...
Summit.....	...	...	...	...	...	...	...	...	...
Tooele.....	...	...	...	...	...	...	...	...	...
Uintah.....	...	...	...	...	2	...	4	...	...
Utah.....	...	...	...	...	...	...	...	1	1
Wasatch.....	...	...	...	...	...	...	...	...	...
Washington.....	...	...	...	...	...	...	...	...	...
Wayne.....	...	...	...	...	...	...	...	...	...
Weber.....	...	...	...	...	...	...	...	...	...

NA Not available.
[1]See table 3, footnote 4, and for counties, footnote 10.
[2]See table 3, footnote 6.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Utah, all mineral operations:												
Including operations classified in manufactures	562	124	242	96	41	22	17	12	4	2	2	...
Mineral industries only	555	124	239	94	39	22	17	12	4	2	2	...
Metal mining, total	351	90	174	52	14	7	4	6	1	1	2	...
Iron ores	7	2	2	...	...	...	1	2	...	...	...	...
Copper ores	17	7	6	2	...	...	...	...	...	...	2	...
Lead and zinc ores	37	12	13	4	2	1	2	1	1	1	...	...
Gold and silver ores:												
Lode gold	9	3	6	...	...	...	...	...	...	...	...	...
Silver ores	11	2	3	4	2	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Manganese ores	11	7	3	1	...	...	...	...	...	...	...	...
Tungsten ores	21	10	4	5	1	1	...	...	...	...	...	...
Metal mining contract services	17	1	9	2	2	...	1	2	...	...	...	...
Uranium-radium-vanadium ores	221	46	128	34	7	5	...	1	...	...	...	...
Bituminous coal	54	5	13	9	9	4	5	5	3	1	...	...
Crude petroleum and natural gas extraction, total	56	12	13	9	9	9	4	...	...	...	...	...
Crude petroleum and natural gas	42	11	8	6	7	7	3	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	10	...	5	1	2	1	1	...	...	...	...	...
Building, repairing, and dismantling rigs and derricks	1	...	...	...	...	1	...	...	...	...	...	...
Oil and gas field contract services, n.e.c.	3	1	...	2	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	101	17	42	26	9	2	4	1	...	...	...	...
Mineral industries only	94	17	39	24	7	2	4	1	...	...	...	...
Dimension sandstone	3	...	2	1	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	7	...	2	1	2	1	1	...	...	...	...	...
Included in manufactures	3	...	1	1	1	...	...	...	...	...	...	...
Sandstone	3	2	...	1	...	...	...	...	...	...	...	...
Stone, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	40	5	19	14	2	...	...	...	...	...	...	...
Foundry sand	3	...	3	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay	5	2	3	...	...	...	...	...	...	...	...	...
Fuller's earth	1	...	...	1	...	...	...	...	...	...	...	...
Kaolin and ball clay	1	...	...	...	...	...	1	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	8	5	2	1	...	...	...	...	...	...	...	...
Included in manufactures	2	...	2	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Fluorspar	4	1	3	...	...	...	...	...	...	...	...	...
Potash, soda, and borate minerals	2	...	1	...	...	...	1	...	...	...	...	...
Phosphate rock	2	...	...	...	1	...	1	...	...	...	...	...
Rock salt	2	...	1	1	...	...	...	...	...	...	...	...
Sulfur	1	...	...	1	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	1	1	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	2	...	...	2	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum (included in manufactures)	2	...	...	1	1	...	...	...	...	...	...	...
Native asphalt and bitumens	6	1	...	1	2	1	...	1	...	...	...	...
Pumice and pumicite	1	...	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Utah, total	10,249	[2]151,662	20,520	2.00	135	20,333	941	15,069	30,209	(7)	7	4	89
Bituminous coal	2,735	24,020	181	0.07	8	59	63	1,086	2,303	...	90	9	1
Crude petroleum and natural gas extraction, total	490	1,127	54	0.11	48	18	xxx	xxx	[3]54	...	40	58	2
Crude petroleum and Natural gas	315	(4)	53	0.17	(NA)	18	xxx	xxx	(NA)	...	40	58	2
Oil and gas field contract services	175	1,191	1	0.01	1	...	xxx	xxx	(NA)	...	...	...	[5]1
Metal mining and Nonmetallic minerals (except fuels) mining, total	7,024	[2]126,515	20,285	2.89	160	20,256	878	13,983	27,852	(7)	7	4	89
Iron ores	312	13,201	18	0.06	1	12	...	20	18	...	...	55	45
Lead and zinc ores	1,334	13,512	1,615	1.21	120	1,614	746	13,752	2,359	...	83	17	...
Uranium-radium-vanadium ores.	772	(NA)	10	0.01	(NA)	...	1	...	11	...	10	20	[6]70
Crushed and broken limestone.	81	702	4	0.05	6	4	...	...	7	...	...	100	...
Sand and gravel	146	1,409	58	0.40	41	58	130	...	194	19	7	50	[5]24
Clay, ceramic, and refractory minerals, n.e.c.	7	86	...	...	...	...	...	...	...	...	...	...	...
Other industries	4,372	97,605	18,580	4.25	190	18,568	1	211	25,263	(7)	(7)	2	98

NA Not available.
xxx Not applicable.
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]See table 1, footnote 6.
[3]Represents water intake only.
[4]See table 2, footnote 5.
[5]Represents "not specified."
[6]Includes "not specified" amounting to 40 percent.
[7]Less than 0.5 percent.



VERMONT

144-1

MINING IN VERMONT: 1954

Rank among States:
Employment, 42
Value of shipments, 41



▲ METAL MINING
NONMETALLIC MINERALS, EXCEPT FUELS, MINING
Δ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 50 employees

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$7,600
NONMETALLIC MINERALS, EXCEPT FUELS, MINING.	8,000

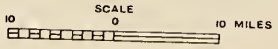


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of lime plants					
	1954[1]	1939[2]	1929[3]	1954	1939[2 4]	1929[4]	1919	1909	1902[5]
Number of operating companies	56	60	(NA)	35	52	(NA)	(NA)	141	160
Number of establishments	62	(NA)	105	40	(NA)	105	93	141	(NA)
Number of mines and quarries	64	77	129	40	70	129	109	188	192
Number of preparation plants	45	21	(NA)	28	21	(NA)	(NA)	(NA)	(NA)
Value of shipments[6]....$1,000..	20,415	6,243	10,276	19,601	6,021	10,276	8,555	8,221	5,905
Value added in mining....do....	15,512	(NA)	8,918	14,868	(NA)	8,918	6,765	6,834	4,829
Number of persons engaged, total	2,093	1,735	3,466	1,974	1,653	3,466	3,239	8,721	5,831
Production and development workers	1,881	1,574	3,154	1,803	1,503	3,154	2,936	8,199	[7]5,398
All other employees	169	121	[8]238	147	113	[8]238	243	353	433
Proprietors and firm members	43	40	74	24	37	74	60	169	
Performing manual labor	31	23	(NA)	16	23	(NA)	18	64	
Man-hours worked by production and development workers....1,000..	4,009	3,148	(NA)	3,835	(NA)	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000..	12,445	3,229	6,294	11,924	3,143	6,294	5,281	6,232	4,566
Wages of production and development workers....do....	6,524	1,719	4,153	6,278	1,659	4,153	3,042	4,475	3,114
Salaries of all other employees....do....	921	297	[8]783	858	288	[8]783	449	370	376
Minerals received for preparation....do....	44	(NA)	(NA)	44	(NA)	(NA)	...	...	(NA)
Supplies....do....	3,281	842	712	3,218	836	712	1,273	955	1,076
Purchased fuel....do....	444	92	133	371	91	133	220	367	
Purchased electric energy....do....	642	273	485	636	263	485	205		
Contract work....do....	589	6	28	519	6	28	92	65	...
Purchased machinery installed....do....	744	(NA)	349	614	(NA)	349	(NA)		
Capital expenditures, total....do....	841	(NA)	(NA)	669	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do....	58	(NA)	845	58	(NA)	845	36	(NA)	(NA)
Preparation plant construction....do....	98	37		74					
Other construction....do....	36		(NA)	25	(NA)	(NA)	(NA)		
New machinery and equipment....do....	606	83		493					
Used plant and equipment....do....	43	9		19					
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000..	64	32	40	54		40	28	27	15
Per production worker	34	20	13	30		13	10	3	3
Prime movers....1,000..	30	6	5	21		5	9	25	15
Electric motors driven by purchased energy....do....	34	26	35	33	(NA)	35	19	2	...
Horsepower rating of electric motors driven by energy generated at establishment....do....	(9)	6	...	...		...	1	6	2
Energy used....million kwh equivalent..	209	93	154	190		154	(NA)		
Coal....1,000 short tons..	3	7	16	3		16	27		
Fuel oils....1,000 barrels..	59	8	3	57		3	...	(NA)	(NA)
Gas....million cu.ft..	...	...	...	...	...	...	...		
Electric energy purchased....million kwh..	47	19	23	47	(NA)	23	(NA)		
Electric energy generated and used....do....	2	1	...	2	1	...	(NA)		

NA Not available.

[1]Figures for number of operating companies, number of establishments, and number of mines and quarries include, but all other figures exclude, data for 1 limestone quarry operated as part of a lime plant and 1 clay pit operated as part of a clay products plant.

[2]Except for value of shipments, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing stone at such operations was $895,000.

[3]Excludes data for common clay and shale operations, if any. No such operations were reported for 1939.

[4]For 1939, includes data for 3 mines and 3 preparation plants in the sand and gravel industry. For 1929, includes data for one sand and gravel establishment and 2 stone quarries operated as part of lime plants.

[5]Includes data for lime plants producing lime valued at $219,000.

[6]For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years represents net production and excludes this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees, if any, at central offices not included in reports for mining and mineral preparation establishments.

[9]Less than 500 horsepower.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Vermont, total		Metal mining (copper ores and zinc ores)	Nonmetallic minerals (except fuels) mining	
					Total	
		Including operations classified in manufactures[1]	Mineral industries only		Including operations classified in manufactures[1]	Mineral industries only
1	Number of operating companies	56	36	3	53	33
2	Number of establishments	62	42	3	59	39
	Number of mines and quarries:					
3	1954	64	42	2	62	40
4	1939	77	(NA)	...	77	(NA)
5	Number of preparation plants	45	27	1	44	26
	Value of shipments:					
6	1954, $1,000	20,415	14,427	2,305	18,110	12,122
7	1939, do	6,243	(NA)	...	6,243	(NA)
8	Value added in mining, do	15,512	10,600	1,602	13,910	8,998
9	Number of persons engaged, total	2,093	1,352	210	1,883	1,142
10	Production and development workers	1,881	1,187	193	1,688	994
11	All other employees	169	142	17	152	125
12	Proprietors and firm members	43	23	...	43	23
13	Performing manual labor	31	17	...	31	17
	Man-hours worked by production and development workers:					
14	1954, 1,000	4,009	2,633	473	3,536	2,160
15	1939, do	[3]3,148	(NA)	...	[3]3,148	(NA)
	At mines:					
16	Underground, do	1,116	1,116	350	766	766
17	Open-pit, do	1,169	383	...	1,169	383
18	Surface (mine shops, yards, etc.), do	306	148	56	250	92
19	At preparation plants, do	1,418	986	67	1,351	919
20	Man-hours spent on development and exploration work (included above), do	47	37	...	47	37
21	Principal expenses designated below, total, $1,000	12,445	8,856	1,636	10,809	7,220
22	Wages of production and development workers, do	6,524	4,153	798	5,726	3,355
23	Salaries of all other employees, do	921	790	120	801	670
24	Minerals received for preparation, do	44	2,644	...	44	2,230
25	Supplies, do	3,281		414	2,867	
	Purchased fuel:					
26	Coal, do	41	20	...	41	20
27	Fuel oil, do	258	236	8	250	228
28	Gas, do	...	...	...	...	...
29	Other fuels, do	145	101	...	145	101
30	Purchased electric energy, do	642	513	126	516	387
31	Contract work, do	589	399	170	419	229
32	Purchased machinery installed, do	744	600	56	688	544
33	Capital expenditures, total, do	841	686	71	770	615
34	Development and exploration of mineral property, do	58	40	15	43	25
35	Preparation plant construction, do	98	93	...	98	93
36	Other construction, do	36	34	...	36	34
37	New machinery and equipment, do	606	484	56	550	428
38	Used plant and equipment, do	43	35	...	43	35
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total, 1,000	64	51	5	59	46
40	Per production worker	34	43	24	35	46
41	Prime movers, 1,000	30	26	1	29	25
42	Electric motors driven by purchased energy, do	34	25	4	30	21
43	Horsepower rating of electric motors driven by energy generated at establishment, do	([5])	([5])	...	([5])	([5])
44	Energy used, million kwh equivalent	209	171	13	196	158
45	Coal, 1,000 short tons	3	1	...	3	1
46	Fuel oil, 1,000 barrels	59	56	1	58	55
47	Gas, million cu.ft	...	...	...	...	...
48	Electric energy purchased, million kwh	47	40	11	36	29
49	Electric energy generated and used, do	2	2	...	2	2
50	Water intake, including mine water used, million gallons	474	467	223	251	244
51	Per production worker, do	0.25	0.39	1.16	0.15	0.24

NA Not available.

[1]See table 1, footnote 1.

[2]Figures for the sand and gravel industry are included with those for the miscellanous nonmetallic minerals (except fuels) industries.

[3]See table 1, footnote 2.

[4]Man-hours worked on floating equipment are included with man-hours at open pits.

[5]Less than one-half of the unit of measure specified.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining—Continued						
Dimension stone			Crushed and broken limestone and slate (mineral industries only)	Sand and gravel	Miscellaneous nonmetallic minerals (except fuels)	
Granite, slate, and marble		Granite only				
Including operations classified in manufactures	Mineral industries only					
23	5	5	4	19	5	1
28	10	5	4	20	5	2
31	11	7	4	20	5	3
54	(NA)	10	14	3	6	4
18	...	2	4	17	5	5
8,231	2,243	4,976	4,388	814	4,677	6
4,170	(NA)	2,123	1,217	(2)	[2]856	7
6,842	1,930	4,094	2,806	644	3,618	8
1,155	414	526	239	119	370	9
1,081	387	492	202	78	327	10
51	24	31	36	22	43	11
23	3	3	1	19	...	12
15	1	1	1	15	...	13
2,194	818	970	512	174	656	14
[3]2,227	(NA)	[3]1,026	418	(2)	[2]503	15
699	699	...	...	...	67	16
842	56	600	86	[4]82	159	17
221	63	220	...	(4)	29	18
432	...	150	426	92	401	19
14	4	...	...	...	33	20
5,102	1,513	2,808	2,836	521	2,350	21
3,459	1,088	1,779	992	246	1,029	22
251	120	161	245	63	242	23
932	...	...	...	...	551	24
	251	504	1,365	63		25
23	2	22	16	...	2	26
22	...	17	95	11	122	27
...	...	...	...	...	...	28
50	6	16	11	62	22	29
175	46	129	100	6	235	30
190	...	180	12	70	147	31
171	27	128	180	130	207	32
174	19	114	197	172	227	33
23	5	...	5	...	15	34
5	...	...	3	24	66	35
3	1	...	22	11	...	36
135	13	114	156	113	146	37
8	...	...	11	24	...	38
22	9	11	9	10	18	39
20	23	23	41	128	55	40
10	6	3	3	9	7	41
12	3	8	6	1	11	42
...	...	...	...	(5)	...	43
42	4	30	56	19	79	44
2	(5)	2	1	...	(5)	45
3	...	2	23	2	30	46
...	...	...	...	...	...	47
9	2	7	7	(5)	20	48
2	2	...	...	...	...	49
8	1	(D)	28	173	42	50
0.01	(5)	(D)	0.14	2.22	0.13	51

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Vermont, all mineral operations:									
Including operations in manufactures[1]	62	20,415	15,512	1,881	169	4,009	6,524	921	798
Mineral industries only	42	14,427	10,600	1,187	142	2,633	4,153	790	651
Metal mining (copper ores and zinc ores)	3	2,305	1,602	193	17	473	798	120	71
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures[1]	59	18,110	13,910	1,688	152	3,536	5,726	801	727
Mineral industries only	39	12,122	8,998	994	125	2,160	3,355	670	580
Dimension stone:									
Including operations in manufactures	28	8,231	6,842	1,081	51	2,194	3,459	251	166
Mineral industries only	10	2,243	1,930	387	24	818	1,088	120	19
Crushed and broken stone (mineral industries only)	4	4,388	2,806	202	36	512	992	245	186
Sand and gravel	20	814	644	78	22	174	246	63	148
Miscellaneous nonmetallic minerals (except fuels)	5	4,677	3,618	327	43	656	1,029	242	227
COUNTY									
Chittenden (sand and gravel)	4	173	122	20	4	32	52	8	...
Orange	4	2,759	2,009	242	28	567	966	181	57
Rutland:									
Including operations in manufactures	24	6,997	5,150	731	42	1,601	2,503	273	265
Mineral industries only	7	5,468	3,880	472	42	1,087	1,713	242	216
Dimension stone quarries with dressing plants (including operations in manufactures)	16	1,529	1,270	259	7	514	790	31	34
Sand and gravel	3	159	148	19	3	47	60	4	53
Washington (including operation in manufactures)	8	4,895	4,131	515	25	1,033	1,821	127	157
Windsor	4	78	188	34	4	78	102	17	1

[1]See table 1, footnote 1.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Vermont, total	Addison	Bennington	Caledonia	Chittenden	Franklin	Grand Isle	Lamoille	Orange	Orleans	Rutland	Washington	Windham	Windsor
All operations, total	62	1	3	2	6	3	1	3	4	2	24	8	1	4
Classified in mineral industries	42	1	3	2	4	3	1	3	4	2	8	6	1	4
Included in manufactures	20	...	...	...	2	...	...	...	...	...	16	2	...	...
Metal mining:														
Copper ores	2	...	...	...	...	...	...	...	2	...	...	...	...	...
Zinc ores	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Nonmetallic minerals (except fuels) mining:														
Dimension stone:														
Granite:														
Classified in mineral industries	3	...	...	...	...	...	...	...	1	1	...	1	...	...
Included in manufactures	2	...	...	...	...	...	...	...	...	...	...	2	...	...
Slate (included in manufactures)	16	...	...	...	...	...	...	...	...	...	16	...	...	...
Marble (classified in mineral industries)	7	...	...	...	...	1	1	...	...	...	3	1	...	1
Crushed and broken stone:														
Limestone:														
Classified in mineral industries	3	...	1	...	...	1	...	...	...	...	...	1	...	...
Included in manufactures	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Slate	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Sand and gravel	20	1	2	2	4	1	...	2	1	...	3	2	1	1
Clay, ceramic, and refactory minerals, n.e.c. (included in manufactures)	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):														
Talc, soapstone, and pyrophyllite	4	...	...	...	...	...	...	1	...	...	...	1	...	2
Nonmetallic minerals, n.e.c. (asbestos)	1	...	...	...	...	...	...	...	...	1	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Vermont, all mineral operations:												
Including operations in manufactures	62	10	17	11	8	7	4	3	2	...	...	...
Mineral industries only	42	7	11	8	5	6	2	1	2	...	...	...
Metal mining, total	3	2	...	...	...	...	...	1	...	...	...	...
Copper ores	2	1	...	...	...	...	...	1	...	...	...	...
Zinc ores	1	1	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations in manufactures	59	8	17	11	8	7	4	2	2	...	...	...
Mineral industries only	39	5	11	8	5	6	2	...	2	...	...	...
Dimension stone:												
Granite:												
Classified in mineral industries	3	...	1	1	...	...	1	...	...	...	...	...
Included in manufactures	2	...	...	...	...	...	...	2	...	...	...	...
Slate (included in manufactures)	16	2	6	2	3	1	2	...	...	...	...	...
Marble (classified in mineral industries)	7	...	1	3	...	2	...	...	1	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	3	...	1	...	1	1	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Slate (classified in mineral industries)	1	...	...	...	...	...	1	...	...	...	...	...
Sand and gravel	20	5	8	4	2	1	...	...	...	...	...	...
Clay, ceramic, and refactory minerals, n.e.c. (included in manufactures)	1	1	...	...	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Talc, soapstone, and pyrophyllite	4	...	...	...	2	2	...	...	...	...	...	...
Asbestos	1	...	...	...	...	...	...	...	1	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Vermont, total	1,187	10,599	397	0.33	37	383	70	110	469	2	60	7	31
Metal mining, total	193	1,602	167	0.87	104	166	56	56	223	...	100	...	...
Nonmetallic minerals (except fuels) mining, total	994	8,997	230	0.23	26	217	14	54	246	3	30	13	[2]54
Dimension stone	387	1,930	1	([3])	1	1	...	...	3	...	...	...	100
Crushed and broken stone	202	2,806	28	0.14	10	18	...	...	28	29	71	...	...
Sand and gravel	78	644	162	2.08	252	160	11	...	173	...	30	18	[4]52
Miscellaneous nonmetallic minerals (except fuels)	327	3,617	39	0.12	11	38	3	54	42	...	3	...	97

[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]Includes "not specified" amounting to 37 percent of total use.
[3]Less than 0.005.
[4]Represents "not specified" only.

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VIRGINIA

145-1

MNING IN VIRGINIA: 1954

Rank among States:
Employment, 13
Value of shipments, 19

▲ METAL MINING
● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
NONMETALLIC MINERALS (EXCEPT FUELS) MINING
△ CLASSIFIED IN MINERAL INDUSTRIES
\+ CLASSIFIED IN MANUFACTURES

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$5,200
COAL MINING	5,200
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	3,900
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	6,700

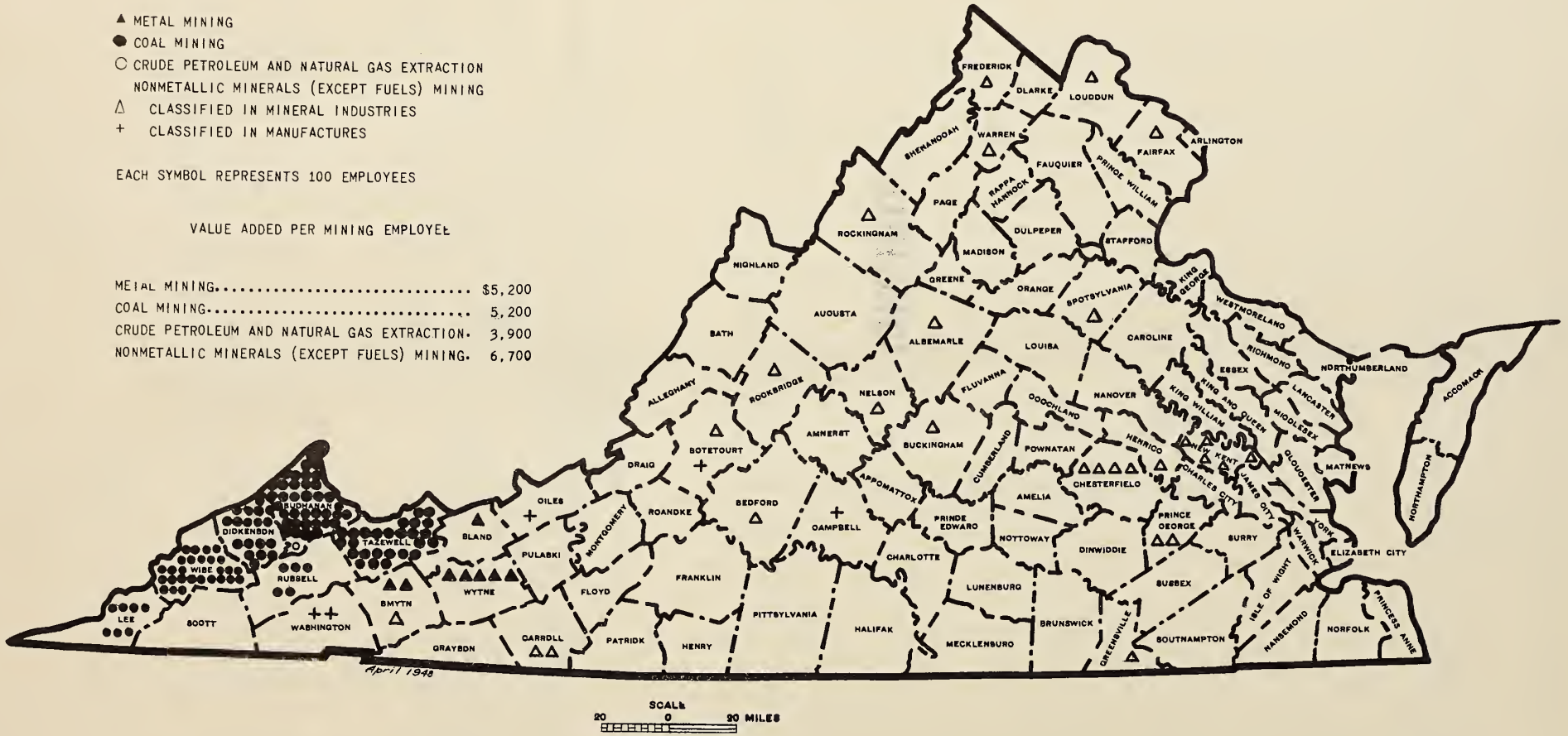


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement and lime plants					
	1954	1939[1]	1929[2]	1954	1939[3]	1929	1919	1909	1902[4]
Number of operating companies	743	223	(NA)	690	[5]176	(NA)	(NA)	[5]163	[5]142
Number of establishments	788	(NA)	193	726	(NA)	173	206	195	(NA)
Number of mines and quarries	773	256	211	711	203	182	220	262	194
Number of oil and gas wells producing at end of year	47	...	(NA)	47	...	(NA)	...	...	...
Number of preparation plants	149	113	(NA)	118	97	(NA)	(NA)	(NA)	(NA)
Value of shipments[6]...$1,000	145,592	34,625	29,541	124,674	32,177	27,839	29,363	8,796	6,280
Value added in mining...do	96,014	28,642	23,936	80,736	26,667	22,606	22,952	6,985	5,381
Number of persons engaged, total	17,775	20,155	16,110	16,339	19,209	15,400	15,674	16,084	9,531
Production and development workers	15,123	19,010	15,281	14,112	18,143	14,606	14,666	15,362	[7]8,866
All other employees	1,741	1,051	[8]770	1,334	977	[8]735	937	634	665
Proprietors and firm members	911	94	59	893	89	59	71	88	(NA)
Performing manual labor	613	51	(NA)	604	50	(NA)	19	15	(NA)
Man-hours worked by production and development workers...1,000	26,508	28,998	(NA)	24,275	(NA)	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total...$1,000	107,532	26,925	22,325	96,860	25,627	21,209	24,341	7,737	4,798
Wages of production and development workers...do	47,156	18,888	14,854	43,738	18,204	14,210	16,208	5,296	3,393
Salaries of all other employees...do	7,908	2,054	[8]1,866	6,313	1,913	[8]1,766	1,722	630	506
Minerals received for preparation...do	10,003	(NA)	(NA)	10,003	(NA)	(NA)	...	...	(NA)
Supplies...do	[9]33,115	4,187	3,699	28,949	3,948	3,483	4,837	1,203	863
Purchased fuel...do	[9]1,875	424	302	1,394	264	225	746	488	
Purchased electric energy...do	[9]2,973	1,328	1,562	2,742	1,265	1,483	483		
Contract work...do	[9]4,502	44	42	3,721	33	42	345	120	36
Purchased machinery installed...do	[10]7,449		1,143	6,201		1,130	(NA)		
Capital expenditures, total...do	[10]10,339	(NA)	(NA)	9,072		(NA)	(NA)		
Development and exploration of mineral property...do	[10]1,580		390	1,577		390	1,143	(NA)	(NA)
Preparation plant construction...do	[10]1,055	198		1,000					
Other construction...do	[10]1,161		(NA)	1,160		(NA)	(NA)		
New machinery and equipment...do	[10]5,400	1,046		4,240					
Used plant and equipment...do	[10]1,143	128		1,095					
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	[10]411	146	112	354		102	58	36	19
Per production worker	27	8	7	25	(NA)	7	4	2	2
Prime movers...1,000	[10]206	33	16	162		11	24	36	19
Electric motors driven by purchased energy...do	[10]205	113	96	192		91	34	([11])	...
Horsepower rating of electric motors driven by energy generated at establishment...do	[10]122	8	3	122		3	12	11	2
Energy used...million kwh equivalent	[10]1,399	701	800	1,052			(NA)		
Coal...1,000 short tons	[10]91	69	90	67			211		
Fuel oils...1,000 barrels	[10]184	20	3	128		(NA)	1	(NA)	(NA)
Gas...million cu.ft	[10]2	...	...	2			...		
Electric energy purchased...million kwh	[10]196	98	99	182			(NA)		
Electric energy generated and used...do	[10]6	6	2	6			(NA)		

NA Not available.

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing slate at such operations was $186,000; this value has been included in the value of shipments and value added in mining. The comparable values for limestone, granite, marble, trap rock, and sandstone are not available.

[2]Excludes data for common clay and shale operations. There were 17 such mines in 1939 with products valued at $160,000.

[3]Includes data for quarries operated as part of cement plants. See also footnote 1.

[4]Includes data for lime plants producing lime valued at $242,000.

[5]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[6]For crushed stone, clay, and gypsum operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[7]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[8]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[9]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[10]Excludes statistics for crushed stone and clay operations classified in manufactures.

[11]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Virginia, total		Metal mining	Bituminous coal	Crude petroleum and natural gas extraction		
		Including operations classified in manufactures	Mineral industries only			Total	Drilling oil and gas wells contract services	Crude petroleum, Natural gas, and Oil and gas field contract services, n.e.c.
1	Number of operating companies	743	710	17	579	13	7	6
2	Number of establishments	788	755	19	607	13	7	6
	Number of mines, quarries, and producing oil and gas wells:							
3	1954	820	787	17	609	47	6	41
4	1939	256	(NA)	13	114	...	...	...
5	Number of preparation plants	149	143	10	31	...	xxx	xxx
	Value of shipments:[1]							
6	1954 ..$1,000..	145,592	137,543	5,764	99,078	1,106	735	371
7	1939 ..do....	[2]34,625	(NA)	1,682	24,994	...	...	...
8	Value added in mining ..do....	96,014	89,095	5,006	61,508	502	495	7
9	Number of persons engaged, total	17,775	17,029	956	12,562	141	117	24
10	Production and development workers	15,123	14,400	843	10,730	116	98	18
11	All other employees	1,741	1,719	111	990	14	10	4
12	Proprietors and firm members	911	910	2	842	11	9	2
13	Performing manual labor	613	613	2	583	4	4	...
	Man-hours worked by production and development workers:							
14	1954 ..1,000..	26,508	25,045	1,564	17,324	236	205	31
15	1939 ..do....	[2]28,998	(NA)	[4]1,246	[4]21,074	...	...	...
	At mines:							
16	Underground ..do....	14,745	14,436	673	13,634	xxx	xxx	xxx
17	Open-pit ..do....	3,644	2,840	293	431	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.) ..do....	[6]3,943	[6]3,908	343	3,259	xxx	xxx	xxx
19	At preparation plants ..do....	[6]3,940	[6]3,625	255		xxx	xxx	xxx
20	At oil and gas field operations ..do....	236	236	xxx	xxx	236	205	31
21	Man-hours spent on development and exploration work (included above) ..do....	555	555	183	44	203	202	1
22	Principal expenses designated below, total ..$1,000..	107,532	104,139	4,408	78,273	1,566	622	944
23	Wages of production and development workers ..do....	47,156	45,027	2,238	34,763	374	328	46
24	Salaries of all other employees ..do....	7,908	7,796	482	4,733	96	59	37
25	Minerals received for preparation ..do....	10,003	10,002	8	9,807	xxx	xxx	xxx
26	Supplies ..do....	[7]33,115	32,000	739	24,437	516	202	314
	Purchased fuel:							
27	Coal ..do....	[7]377	371	(9)	1	...	...	...
28	Fuel oil ..do....	[7]742	742	76	189	...	...	...
29	Gas ..do....	(9)	(9)	...	...	(9)	(9)	...
30	Other fuels ..do....	[7]756	748	48	239	6	6	(9)
31	Purchased electric energy ..do....	[7]2,973	2,951	259	1,714	1	1	...
32	Contract work ..do....	[7]4,502	4,502	558	2,390	573	26	547
33	Purchased machinery installed ..do....	[8]7,449	7,429	1,099	3,524	69	54	15
34	Capital expenditures, total ..do....	[8]10,339	10,297	2,029	4,731	561	49	512
35	Development and exploration of mineral property ..do....	[8]1,580	1,580	877	123	331	...	331
36	Preparation plant construction ..do....	[8]1,055	1,023	214	550	xxx	xxx	xxx
37	Other construction ..do....	[8]1,161	1,161	80	1,039	19	...	19
38	New machinery and equipment ..do....	[8]5,400	5,390	739	2,282	209	47	162
39	Used plant and equipment ..do....	[8]1,143	1,143	119	737	2	2	...
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total ..1,000..	[8]411	408	26	201	3	3	(9)
41	Per production worker	27	28	31	19	26	31	xxx
42	Prime movers ..1,000..	[8]206	205	14	69	3	3	(9)
43	Electric motors driven by purchased energy ..do....	[8]205	203	12	132	...	...	...
44	Horsepower rating of electric motors driven by energy generated at establishment ..do....	[8]122	122	115	5	...	...	...
45	Energy used ..million kwh equivalent..	[8]1,399	1,389	58	422	2	2	(9)
	Produced and used for fuel:							
46	Coal ..1,000 short tons..	24	24	xxx	24	xxx	xxx	xxx
47	Natural gas ..million cu.ft..	1	1	xxx	xxx	1	1	...
	Purchased fuel:							
48	Coal ..1,000 short tons..	[8]67	66	(9)	(9)	...	...	...
49	Fuel oil ..1,000 barrels..	[8]184	184	13	40	...	...	...
50	Gas ..million cu.ft...	[8]1	1	...	...	1	1	...
51	Electric energy purchased ..million kwh..	[8]196	196	23	109	(9)	(9)	...
52	Electric energy generated and used ..do....	[8]6	6	...	6	...	...	...
53	Water intake, including mine water used ..million gallons..	[8]7,577	7,577	1,360	1,848	...	...	...
54	Per production worker ..do....	0.50	0.53	1.61	0.17	...	...	...

NA Not available. xxx Not applicable. [1]See table 1, footnote 6. [2]See table 1, footnote 1. [3]Figures for 1 mine and preparation plant classified in the Clay, ceramic, and refractory minerals, n.e.c., industry are included with those for Other nonmetallic minerals (except fuels) industries. [4]Figures for 1 nonproducing manganese ores mine and for 2 nonproducing bituminous coal mines are included with those for Other nonmetallic minerals (except fuels) industries.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining											
Total		Dimension stone (including operations classified in manufactures)	Crushed and broken stone				Sand and gravel	Clay, ceramic, and refractory minerals, n.e.c.		Other nonmetallic minerals (except fuels) (including operations classified in manufactures)	
			All stone		Limestone (mineral industries only)	Granite					
Including operations classified in manufactures	Mineral industries only		Including operations classified in manufactures	Mineral industries only				Including operations classified in manufactures	Mineral industries only		
135	102	10	70	60	45	6	27	19	4	12	1
149	116	10	75	64	47	6	32	19	4	13	2
147	114	10	75	64	47	6	32	19	4	11	3
129	(NA)	9	74	(NA)	61	6	15	18	(NA)	13	4
108	102	6	63	63	46	6	27	4	4	8	5
39,644	31,595	1,093	18,224	12,940	8,561	2,130	13,616	2,018	1,318	4,693	6
[2]7,949	(NA)	[2]529	4,281	(NA)	3,424	593	1,522	[3]160	(NA)	[3]1,457	7
28,998	22,079	942	13,388	8,907	6,056	1,452	9,341	1,456	887	3,871	8
4,116	3,370	289	1,790	1,506	1,052	198	978	174	116	885	9
3,434	2,711	255	1,626	1,342	936	187	569	158	100	826	10
626	604	29	137	137	100	8	392	15	15	53	11
56	55	5	27	27	16	3	17	1	1	6	12
24	24	2	9	9	6	...	8	1	1	4	13
7,384	5,921	529	3,611	3,043	2,080	441	1,325	340	223	1,579	14
[2] [4]6,678	(NA)	[2]370	3,727	(NA)	3,223	331	890	[3]155	(NA)	[3] [4]1,536	15
438	129	...	12	12	12	...	....	...	...	426	16
2,920	2,116	170	1,934	1,366	989	205	[5]413	165	48	238	17
341	306	44	234	234	206	...	(NA)	...	...	63	18
3,685	3,370	315	1,431	1,431	873	236	912	175	175	852	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
125	125	...	62	62	35	...	...	...	...	63	21
23,285	19,892	876	10,061	8,299	5,423	1,240	7,792	1,118	799	3,438	22
9,781	7,652	560	4,632	3,673	2,566	475	1,978	481	293	2,130	23
2,597	2,485	143	614	614	422	42	1,513	82	82	245	24
188	187	3	...	...	...	...	...	...	...	185	25
[7]7,423	6,308	125		2,510	1,622	533	2,967		265	[7]622	26
[7]376	370	7		309	38	3	32		3	[7]25	27
[7]477	477	...	4,815	227	131	59	170	555	61	[7]19	28
...	...	...		...	...	...	...		...	...	29
[7]463	455	12		226	175	11	205		10	[7]10	30
[7]999	977	26		609	444	78	155		76	[7]133	31
[7]981	981	...		131	25	39	772		9	[7]69	32
[8]2,757	2,737	43		1,344	1,049	184	1,160		88	[8]122	33
[8]3,018	2,976	65		1,323	979	229	1,186		81	[8]363	34
[8]249	249	...		27	24	...	3		...	[8]219	35
[8]291	259	32		176	118	24	49		6	[8]28	36
[8]23	23	...		12	9	...	1		...	[8]10	37
[8]2,170	2,160	15		900	629	200	1,085		75	[8]95	38
[8]285	285	18		208	199	5	48		...	[8]11	39
[3]181	178	4		106	75	15	52		5	[8]14	40
53	66	16		79	80	80	91		50	17	41
[8]120	119	2		68	47	10	42		2	[8]6	42
[8]61	59	2	(NA)	38	28	5	10	(NA)	3	[8]8	43
[8]2	2	...		2	2	...	...		...	...	44
[8]917	907	11		519	198	28	316		31	[8]40	45
xxx	xxx	xxx		xxx	xxx	xxx	xxx		xxx	xxx	46
xxx	xxx	xxx		xxx	xxx	xxx	xxx		xxx	xxx	47
[8]67	66	1		39	4	...	24		...	[8]3	48
[8]131	131	...		72	55	12	42		14	[8]3	49
...	...	...		...	...	...	...		...	...	50
[8]64	64	...		41	30	5	9		5	[8]9	51
...	...	...		...	...	...	...		...	...	52
[8]4,369	4,369	...		890	411	439	3,205		46	[8]228	53
1.27	1.61	...		0.66	0.44	2.35	5.63		0.46	0.28	54

[5]Includes man-hours worked on floating equipment. [6]For bituminous coal, man-hours "At preparation plant" are included with the man-hours "At surface (including mine shops and yards)", since only 47 percent of the coal shipped was mechanically cleaned. [7]See table 1, footnote 9.
[8]See table 1, footnote 10. [9]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Virginia, all mineral operations:									
Including operations in manufactures	788	145,592	96,014	15,123	1,741	26,508	47,156	7,908	[2]9,196
Mineral industries only	755	137,543	89,095	14,400	1,719	25,045	45,027	7,796	9,154
Metal mining	19	5,764	5,006	843	111	1,564	2,238	482	1,910
Bituminous coal	607	99,078	61,508	10,730	990	17,324	34,763	4,733	3,994
Crude petroleum and natural gas extraction[3]	13	1,106	502	116	14	236	374	96	559
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	149	39,644	28,998	3,434	626	7,384	9,781	2,597	[2]2,733
Mineral industries only	116	31,595	22,079	2,711	604	5,921	7,652	2,485	2,691
Dimension stone (including operations in manufactures)	10	1,093	942	255	29	529	560	143	47
Crushed and broken stone:									
Including operations in manufactures	75	18,224	13,388	1,626	137	3,611	4,632	614	(NA)
Mineral industries only	64	12,940	8,907	1,342	137	3,043	3,673	614	1,115
Sand and gravel	32	13,616	9,341	569	392	1,325	1,978	1,513	1,138
Clay, ceramic, and refractory minerals, n.e.c:									
Including operations in manufactures	19	2,018	1,456	158	15	340	481	82	(NA)
Mineral industries only	4	1,318	887	100	15	223	293	82	81
Other nonmetallic minerals (except fuels) industries (including operations in manufactures)	13	4,693	3,871	826	53	1,579	2,130	245	352
COUNTY									
Amherst	3	597	424	[4]32	(4)	62	[4]121	(4)	4
Botetourt (including operations in manufactures)	6	3,004	2,108	[4]235	(4)	494	[4]694	(4)	(NA)
Buchanan (Bituminous coal only)	286	34,244	19,788	3,824	189	6,066	10,959	714	1,151
Buckingham (including operations in manufactures)	6	1,640	998	244	30	505	584	137	43
Dickenson (Bituminous coal only)	59	18,657	11,062	1,666	127	2,743	5,572	613	304
Fairfax	5	1,725	957	63	20	176	295	120	66
Frederick (mineral industries only)	5	880	606	110	27	245	294	80	51
Giles (including operations in manufactures)	6	1,357	915	148	9	312	470	16	40
Henrico	4	966	725	99	17	226	342	226	210
Lee (Bituminous coal only)	32	4,856	3,018	654	13	942	2,079	46	59
Montgomery	6	210	115	35	3	65	80	2	2
Prince Georges	3	834	599	100	10	197	249	38	14
Princess Anne	4	334	272	22	5	51	91	15	45
Roanoke (including operations in manufactures)	5	766	553	71	3	170	275	13	80
Rockbridge (mineral industries only)	4	713	475	84	14	174	177	74	80
Rockingham	4	603	468	78	10	165	181	38	89
Russell	31	3,848	2,655	503	34	757	1,523	200	61
Bituminous coal	28	3,564	2,421	467	31	684	1,440	182	28
Crushed and broken stone	3	284	234	36	3	73	83	18	33
Shenandoah	5	398	422	79	1	168	266	7	373
Smyth (mineral industries only)	10	1,501	1,342	268	4	442	546	6	483
Tazewell:									
Including operations in manufactures	45	13,210	10,036	1,670	24	2,773	6,546	149	201
Mineral industries only	42	13,010	9,881	1,662	24	2,757	6,523	149	201
Washington (mineral industries only)	4	440	290	59	7	126	186	37	60
Wise (Bituminous coal only)	152	24,546	15,235	2,420	276	4,069	8,114	1,197	2,249
Wythe	4	(D)	(D)	477	96	(D)	(D)	(D)	(D)
Richmond City (operations in manufactures)	4	[1]200	[1]145	14	(NA)	28	51	(NA)	(NA)

D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.
[1]See table 1, footnote 6.
[2]See table 1, footnote 10.
[3]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries.
[4]Figures for "All other employees" are included with these for "Production and development workers."

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

State and county	All mineral operations			Metal mining				Bituminous coal	Crude petroleum and natural gas extraction[1]		Nonmetallic minerals (except fuels) mining (Dimension stone)		
	Total	Classified in mineral industries	Included in manufactures	Lead and zinc ores	Manganese ores	Metal mining contract services	Titanium ores		Crude petroleum and natural gas	Oil and gas field contract services	Limestone	Slate (included in manufactures)	Sandstone
Virginia, total.	788	755	33	4	12	2	1	607	5	8	2	4	1
Accomack	1	1	...	...	...	...	...	...	...		...	...	...
Albemarle	2	2	...	...	...	...	...	...	...		...	...	...
Amelia	1	1	...	...	...	...	...	...	...		...	...	...
Amherst	3	3	...	...	...	1	1	...	...		...	...	...
Appomattox	1	1	...	...	...	...	...	...	...		...	...	...
Augusta	6	4	2	...	1	...	...	...	...		...	...	...
Bedford	4	4	...	...	...	...	...	...	...		...	...	...
Bland	4	4	...	...	4	...	...	...	...		...	...	...
Botetourt	6	3	3	...	...	...	...	...	...		...	...	...
Buchanan	288	288	...	...	...	...	...	286	2		...	...	...
Buckingham	6	3	3	1	...	...	...	...	...		...	3	...
Campbell	1	...	1	...	...	...	...	...	...		...	...	...
Caroline	1	1	...	...	...	...	...	...	...		...	...	...
Carroll	1	1	...	...	...	...	...	...	...		...	...	...
Chesterfield	1	1	...	...	...	...	...	...	...		...	...	...
Clarke	1	1	...	...	...	...	...	...	...		...	...	...
Culpeper	2	2	...	...	...	...	...	...	...		...	...	...
Dickenson	60	60	...	...	...	...	...	59	1		...	...	...
Fairfax	5	5	...	...	...	...	...	...	...		...	...	...
Fauquier	4	2	2	...	...	...	...	...	...		...	1	1
Floyd	2	2	...	...	...	...	...	...	...		...	...	...
Franklin	1	1	...	...	...	...	...	...	...		...	...	...
Frederick	7	5	2	...	1	...	...	...	...		1	...	...
Giles	6	3	3	...	...	...	...	...	...		...	...	...
Gloucester	2	2	...	...	...	...	...	...	...		...	...	...
Goochland	1	1	...	...	...	...	...	...	...		...	...	...
Greensville	1	1	...	...	...	...	...	...	...		...	...	...
Henrico	4	4	...	...	...	...	...	...	...		...	...	...
Highland	2	2	...	...	...	...	...	...	...		...	...	...
James City	1	1	...	...	...	...	...	...	...		...	...	...
Lancaster	1	1	...	...	...	...	...	...	...		...	...	...
Lee	34	34	...	...	...	...	...	32	1		...	...	...
Loudoun	2	2	...	...	...	...	...	...	...	(NA)	...	...	...
Montgomery	6	6	...	...	...	...	...	5	...		...	...	...
Nansemond	2	1	1	...	...	...	...	...	...		1	...	...
Nelson	2	2	...	...	...	...	...	...	...		...	...	...
New Kent	1	1	...	...	...	...	...	...	...		...	...	...
Norfolk	1	1	...	...	...	...	...	...	...		...	...	...
Orange	2	2	...	...	...	...	...	...	...		...	...	...
Page	1	1	...	...	...	...	...	...	...		...	...	...
Powhatan	2	2	...	...	...	...	...	...	...		...	...	...
Prince Edward	1	1	...	...	...	...	...	...	...		...	...	...
Prince Georges	3	3	...	...	...	...	...	...	...		...	...	...
Prince William	2	1	1	...	...	...	...	...	...		...	...	...
Princess Anne	4	4	...	...	...	...	...	...	...		...	...	...
Pulaski	1	1	...	...	...	...	...	...	...		...	...	...
Rappahannock	1	1	...	...	...	...	...	...	...		...	...	...
Richmond	1	1	...	...	...	...	...	...	...		...	...	...
Roanoke	5	4	1	...	...	1	...	...	...		...	...	...
Rockbridge	5	4	1	...	1	...	...	...	...		...	...	...
Rockingham	4	4	...	...	...	...	...	...	...		...	...	...
Russell	31	31	...	...	...	...	...	28	...		...	...	...
Scott	4	4	...	...	...	...	...	3	...		...	...	...
Shenandoah	5	5	...	1	...	...	...	...	...		...	...	...
Smyth	12	10	2	...	3	...	...	...	...		...	...	...
Southampton	1	1	...	...	1	...	...	...	...		...	...	...
Spotsylvania	1	1	...	...	...	...	...	...	...		...	...	...
Sussex	1	1	...	...	...	...	...	...	...		...	...	...
Tazewell	45	42	3	...	...	...	...	42	...		...	...	...
Warren	2	1	1	...	...	...	...	...	...		...	...	...
Washington	5	4	1	...	1	...	...	...	...		...	...	...
Wise	155	155	...	...	...	...	...	152	...		...	...	...
Wythe	4	4	...	2	...	...	...	...	...		...	...	...
Falls Church city	1	1	...	...	...	...	...	...	...		...	...	...
Richmond city	4	...	4	...	...	...	...	...	...		...	...	...
South Norfolk city	2	...	2	...	...	...	...	...	...		...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

State and county	Nonmetallic minerals (except fuels) mining—Continued										
	Dimension stone—Con.		Crushed and broken stone								
	Stone, n.e.c.		Limestone		Granite	Slate	Marble	Trap rock	Sandstone	Stone, n.e.c.	
	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures[2]						Classified in mineral industries	Included in manufactures
Virginia, total.	1	2	47	10	6	3	1	3	1	3	1
Accomack	...	...	...	...	...	...	...	...	...	...	...
Albemarle	...	...	...	...	1	1	...	...	...	...	...
Amelia	...	...	...	...	...	...	...	...	...	...	...
Amherst	...	...	...	...	...	...	...	...	...	...	...
Appomattox	...	...	1	...	...	...	...	...	...	...	...
Augusta	...	...	2	1	...	...	...	...	...	...	...
Bedford	...	...	1	...	...	...	...	...	...	...	...
Bland	...	...	...	...	...	...	...	...	...	...	...
Botetourt	...	...	3	1	...	...	...	...	...	...	...
Buchanan	...	...	...	...	...	...	...	...	...	...	...
Buckingham	...	...	...	...	...	2	...	...	...	...	...
Campbell	...	1	...	...	...	...	...	...	...	...	...
Caroline	...	...	...	...	...	...	...	...	...	...	...
Carroll	...	...	...	...	...	...	...	...	...	...	...
Chesterfield	...	...	...	...	...	...	...	...	...	...	...
Clarke	...	...	1	...	...	...	...	...	...	...	...
Culpeper	...	...	2	...	...	...	...	...	...	...	...
Dickenson	...	...	...	...	...	...	...	...	...	...	...
Fairfax	...	...	...	...	...	...	...	...	...	...	...
Fauquier	...	1	...	...	...	...	...	1	...	...	...
Floyd	...	...	1	...	...	...	...	1	...	...	...
Franklin	...	...	...	...	...	...	...	...	...	...	...
Frederick	...	...	1	1	...	...	...	...	...	...	...
Giles	...	...	3	3	...	...	...	...	...	...	...
Gloucester	...	...	2	...	...	...	...	...	...	...	...
Goochland	...	...	...	...	1	...	...	...	...	...	...
Greensville	...	...	...	...	1	...	...	...	...	...	...
Henrico	...	...	...	...	...	...	...	...	...	...	...
Highland	...	...	...	...	1	...	...	...	...	...	...
James City	...	...	...	...	...	...	...	...	...	...	...
Lancaster	...	...	...	...	...	...	...	...	...	...	...
Lee	...	...	1	...	...	...	...	...	...	...	...
Loudoun	...	...	1	...	...	...	...	1	...	...	...
Montgomery	...	...	1	...	...	...	...	...	...	...	...
Nansemond	...	...	...	...	...	...	...	...	...	...	...
Nelson	...	...	...	...	...	...	...	...	...	...	...
New Kent	...	...	...	...	...	...	...	...	...	...	...
Norfolk	...	...	...	...	...	...	...	...	...	...	...
Orange	...	...	...	...	1	...	...	...	...	1	...
Page	...	...	1	...	...	...	...	...	...	...	...
Powhatan	...	...	...	...	...	...	...	...	...	...	...
Prince Edward	...	...	...	...	...	...	...	...	...	...	...
Prince Georges	...	...	...	...	...	...	...	...	...	...	...
Prince William	1	...	...	...	...	...	...	...	...	...	...
Princess Anne	...	...	...	...	...	...	...	...	...	...	...
Pulaski	...	...	...	...	...	...	...	...	...	...	...
Rappahannock	...	...	1	...	...	...	...	...	...	...	...
Richmond	...	...	1	...	...	...	...	...	...	...	...
Roanoke	...	...	1	...	...	...	...	...	...	...	...
Rockbridge	...	...	1	...	...	...	...	...	1	...	...
Rockingham	...	...	4	...	...	...	...	...	...	...	...
Russell	...	...	2	...	...	...	1	...	...	...	...
Scott	...	...	...	...	...	...	...	...	...	1	...
Shenandoah	...	...	4	...	...	...	...	...	...	...	...
Smyth	...	...	4	1	...	...	...	...	...	...	...
Southampton	...	...	...	...	...	...	...	...	...	...	...
Spotsylvania	...	...	...	...	...	...	...	...	...	...	...
Sussex	...	...	1	...	...	...	...	...	...	...	...
Tazewell	...	...	...	1	...	...	...	...	...	...	1
Warren	...	...	1	1	...	...	...	...	...	...	...
Washington	...	...	3	...	...	...	...	...	...	...	...
Wise	...	...	2	...	...	...	...	...	...	1	...
Wythe	...	...	1	...	...	...	...	...	...	...	...
Falls Church city	...	...	...	...	1	...	...	...	...	...	...
Richmond city	...	...	...	...	...	...	...	...	...	...	...
South Norfolk city	...	...	...	1	...	...	...	...	...	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

State and county	Nonmetallic minerals (except fuels) mining—Continued												
	Sand and gravel			Clay, ceramic, and refractory minerals			Natural abrasives, except sand, n.e.c.	Chemical and fertilizer mineral mining, n.e.c.	Miscellaneous nonmetallic minerals (except fuels)				
									Gypsum		Mica	Talc, soapstone, and pyrophyllite	Nonmetallic minerals, n.e.c.
	Common sand and gravel	Glass sand	Foundry sand	Feldspar	Clay, ceramic, and refractory minerals, n.e.c.				Classified in mineral industries	Included in manufactures			
					Classified in mineral industries	Included in manufactures							
Virginia, total.	29	2	1	2	4	15	1	2	1	1	3	2	1
Accomack	1	...	...	...	...	...	...	...	...	...	...	...	...
Albemarle	...	...	...	...	...	...	...	...	...	...	...	...	...
Amelia	...	...	...	...	...	...	...	...	...	...	1	...	...
Amherst	1	...	...	...	...	...	...	...	...	...	...	...	...
Appomattox	...	...	...	...	...	...	...	...	...	...	...	...	...
Augusta	1	...	...	...	...	1	...	...	...	...	...	...	...
Bedford	...	...	...	2	1	...	...	...	...	...	...	...	...
Bland	...	...	...	...	...	...	...	...	...	...	...	...	...
Botetourt	...	...	...	...	...	2	...	...	...	...	...	...	...
Buchanan	...	...	...	...	...	...	...	...	...	...	...	...	...
Buckingham	...	...	...	...	...	...	...	...	...	...	...	...	...
Campbell	...	...	...	...	...	...	...	...	...	...	...	...	...
Caroline	1	...	...	...	...	...	...	...	...	...	...	...	...
Carroll	...	...	...	...	...	...	...	1	...	...	...	...	...
Chesterfield	1	...	...	...	...	...	...	...	...	...	...	...	...
Clarke	...	...	...	...	...	...	...	...	...	...	...	...	...
Culpeper	...	...	...	...	...	...	...	...	...	...	...	...	...
Dickenson	...	...	...	...	...	...	...	...	...	...	...	...	...
Fairfax	5	...	...	...	...	...	...	...	...	...	...	...	...
Fauquier	...	...	...	...	...	...	...	...	...	...	...	...	...
Floyd	...	...	...	...	...	...	...	...	...	...	...	...	...
Franklin	...	...	...	...	...	...	...	...	...	...	...	1	...
Frederick	...	1	...	...	...	1	1	...	...	...	...	...	...
Giles	...	...	...	...	...	...	...	...	...	...	...	...	...
Gloucester	...	...	...	...	...	...	...	...	...	...	...	...	...
Goochland	...	...	...	...	...	...	...	...	...	...	...	...	...
Greensville	...	...	...	...	...	...	...	...	...	...	...	...	...
Henrico	3	...	1	...	...	...	...	...	...	...	...	...	...
Highland	...	...	...	...	...	...	...	...	...	...	...	...	1
James City	1	...	...	...	...	...	...	...	...	...	...	...	...
Lancaster	1	...	...	...	...	...	...	...	...	...	...	...	...
Lee	...	...	...	...	...	...	...	...	...	...	...	...	...
Loudoun	...	...	...	...	...	...	...	...	...	...	...	...	...
Montgomery	...	...	...	...	...	...	...	...	...	...	...	...	...
Nansemond	...	...	...	...	...	1	...	...	...	...	...	...	...
Nelson	...	...	...	...	2	...	...	...	...	...	...	...	...
New Kent	...	...	...	...	...	...	...	...	...	...	...	1	...
Norfolk	...	...	...	...	...	...	...	...	1	...	...	...	...
Orange	...	...	...	...	...	...	...	...	...	...	...	...	...
Page	...	...	...	...	...	...	...	...	...	...	...	...	...
Powhatan	...	...	...	...	...	...	...	...	...	...	2	...	...
Prince Edward	...	...	...	...	1	...	...	...	...	...	...	...	...
Prince Georges	3	...	...	...	...	...	...	...	...	...	...	...	...
Prince William	...	...	...	...	...	1	...	...	...	...	...	...	...
Princess Anne	4	...	...	...	...	...	...	...	...	...	...	...	...
Pulaski	...	...	...	...	...	...	...	1	...	...	...	...	...
Rappahannock	...	...	...	...	...	...	...	...	...	...	...	...	...
Richmond	...	...	...	...	...	...	...	...	...	...	...	...	...
Roanoke	2	...	...	...	...	1	...	...	...	...	...	...	...
Rockbridge	...	1	...	...	...	1	...	...	...	...	...	...	...
Rockingham	...	...	...	...	...	...	...	...	...	...	...	...	...
Russell	...	...	...	...	...	...	...	...	...	...	...	...	...
Scott	...	...	...	...	...	...	...	...	...	...	...	...	...
Shenandoah	...	...	...	...	...	...	...	...	...	...	...	...	...
Smyth	3	...	...	...	...	1	...	...	...	...	...	...	...
Southampton	...	...	...	...	...	...	...	...	...	...	...	...	...
Spotyslvania	1	...	...	...	...	...	...	...	...	...	...	...	...
Sussex	...	...	...	...	...	...	...	...	...	...	...	...	...
Tazewell	...	...	...	...	...	1	...	...	...	...	...	...	...
Warren	...	...	...	...	...	...	...	...	...	...	...	...	...
Washington	...	...	...	...	...	...	...	...	...	1	...	...	...
Wise	...	...	...	...	...	...	...	...	...	...	...	...	...
Wythe	1	...	...	...	...	...	...	...	...	...	...	...	...
Falls Church city	...	...	...	...	...	...	...	...	...	...	...	...	...
Richmond city	...	...	...	...	...	4	...	...	...	...	...	...	...
South Norfolk city	...	...	...	...	...	1	...	...	...	...	...	...	...

NA Not available.
[1]See table 1, footnote 3.
[2]Includes 1 stone quarry operated as part of a wholesale trade establishment.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Virginia, all mineral operations:												
Including operations classified in manufactures	788	25	289	173	137	102	38	10	10	4	...	...
Mineral industries only	755	25	275	167	135	97	33	9	10	4	...	...
Metal mining, total	19	1	7	...	3	5	1	1	...	1	...	...
Lead and zinc ores	4	1	1	...	...	1	...	...	...	1	...	...
Manganese ores	12	...	5	...	3	2	1	1	...	...	...	...
Metal mining contract services	2	...	1	...	...	1	...	...	...	...	...	...
Titanium ores	1	...	...	...	...	1	...	...	...	...	...	...
Bituminous coal	607	23	237	143	108	56	22	7	8	3	...	...
Crude petroleum and natural gas extraction, total	13	...	6	4	1	2	...	...	...	...	...	...
Crude petroleum and Natural gas	5	...	4	...	1	...	...	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	7	...	1	4	...	2	...	...	...	...	...	...
Oil and gas field contract services, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	149	1	39	26	25	39	15	2	2	...	...	...
Mineral industries only	116	1	25	20	23	34	10	1	2	...	...	...
Dimension stone:												
Limestone	2	...	1	...	1	...	...	...	...	...	...	...
Slate (included in manufactures)	4	...	1	...	...	1	2	...	...	...	...	...
Sandstone	1	...	...	...	...	1	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	1	...	...	...	1	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	47	...	6	8	11	17	5	...	...	...	...	...
Included in manufactures[1]	10	...	1	1	2	4	2	...	...	...	...	...
Granite	6	...	...	2	1	2	1	...	...	...	...	...
Slate	3	...	...	...	2	...	1	...	...	...	...	...
Marble	1	...	...	...	1	...	...	...	...	...	...	...
Trap rock	3	...	...	...	...	3	...	...	...	...	...	...
Sandstone	1	...	...	...	...	1	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	3	...	1	1	1	...	...	...	...	...	...	...
Included in manufactures[1]	1	...	1	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	29	...	11	7	3	5	2	...	1	...	...	...
Glass sand	2	...	...	...	...	2	...	...	...	...	...	...
Foundry sand	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Feldspar	2	...	...	...	1	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	4	...	1	...	...	2	1	...	...	...	...	...
Included in manufactures	15	...	10	5	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	1	...	...	...	1	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	2	...	...	...	1	...	...	1	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum:												
Classified in mineral industries	1	...	...	1	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	...	...	...	...	1	...	...	...	...
Mica	3	..1	2	...	...	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	2	...	...	1	...	...	...	...	1	...	...	...
Nonmetallic minerals, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...

[1]See table 4, footnote 2.

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Virginia, total	14,400	89,095	5,304	0.37	60	3,864	2,273	2,794	13,607	1	80	6	13
Metal mining	843	5,006	894	1.06	179	852	466	1,969	1,464	...	100	...	...
Bituminous coal	10,730	61,508	1,446	0.13	24	101	402	651	2,691	1	95	2	2
Crude petroleum and natural gas extraction	116	502	...	...	...	...	xxx	xxx	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	2,711	22,079	2,964	1.09	134	2,911	1,405	174	9,452	1	65	11	23
Crushed and broken stone:													
Limestone	936	6,056	396	0.42	65	366	15	33	435	...	30	1	[2]69
Granite	187	1,452	324	1.73	223	324	115	115	519	...	100	...	...
Other stone	219	1,399	40	0.18	29	40	...	22	40	...	65	...	35
Sand and gravel	569	9,341	1,930	3.39	207	1,926	1,275	...	8,169	1	63	16	20
Clay, ceramic, and refractory minerals, n.e.c	100	887	46	0.46	52	46	...	...	61	11	89	...	...
Dimension stone and Other nonmetallic minerals (except fuels) mining industries	700	2,944	228	0.33	77	209	...	4	228	...	100	...	...

xxx Not applicable.

[1]For computations of water intake for production worker, including mine water used, see table 2.

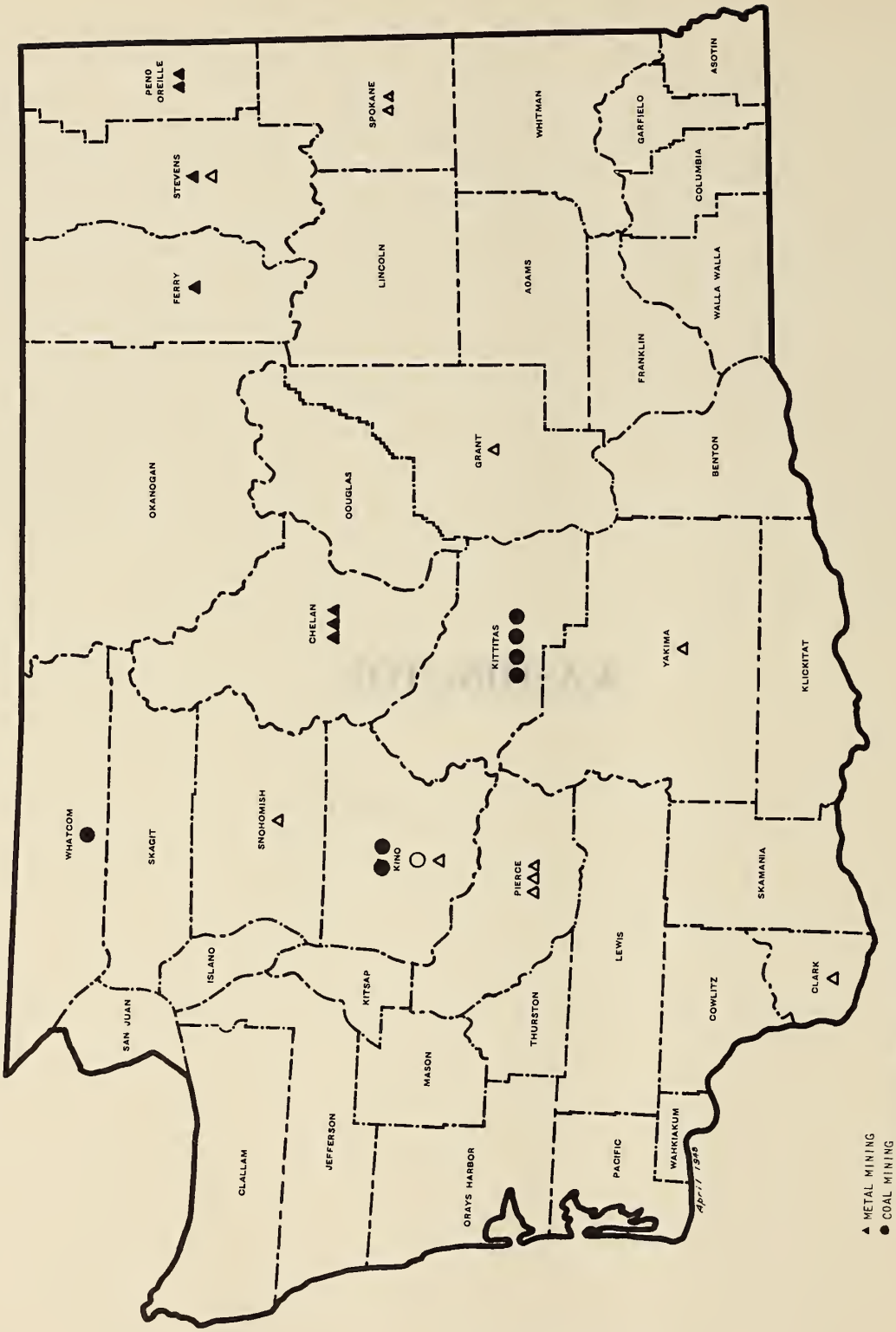
[2]Includes "not specified" amounting to 13 percent.

WASHINGTON

146-1

MINING IN WASHINGTON: 1954

Rank among States:
Employment, 34
Value of shipments, 36



▲ METAL MINING
● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$7,700
COAL MINING AND CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	3,900
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	8,800

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement and lime establishments					
	1954	1939[1]	1929[2]	1954	1939[3]	1929[4]	1919	1909	1902[5]
Number of operating companies	263	157	(NA)	149	[6]125	(NA)	(NA)	[6]290	[6]235
Number of establishments	311	(NA)	141	165	(NA)	115	98	425	(NA)
Number of mines and quarries	299	174	159	155	138	123	106	308	241
Number of oil and gas wells producing at end of year	...	12	(NA)	...	12	(NA)	...	...	...
Number of preparation plants	191	79	(NA)	93	60	(NA)	(NA)	(NA)	(NA)
Value of shipments[7]....$1,000	[8]34,998	13,694	13,367	[8]19,589	12,218	11,709	13,329	7,459	5,394
Value added in mining....do	[8]25,182	11,075	11,057	[8]13,802	9,857	9,777	10,387	6,063	4,435
Number of persons engaged, total	3,447	4,362	4,458	2,297	3,961	4,111	5,530	7,836	5,467
Production and development workers	2,647	3,894	4,131	1,855	3,543	3,834	5,155	7,420	[9]5,087
All other employees	581	354	[10]294	335	316	[10]247	332	184	380
Proprietors and firm members	219	114	[11]33	107	102	[11]30	43	232	(NA)
Performing manual labor	140	74	(NA)	75	73	(NA)	17	107	(NA)
Man-hours worked by production and development workers....1,000	4,912	6,608	(NA)	3,374	(NA)	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000	25,042	8,822	...	15,807	7,951	8,548	11,272	4,795	5,691
Wages of production and development workers....do	11,403	5,376	6,480	7,775	4,867	6,032	7,629	3,128	4,292
Salaries of all other employees....do	3,378	827	[10]716	1,849	723	[10]584	701	271	440
Minerals received for preparation....do	214	(NA)	(NA)	214	(NA)	(NA)	...	156	(NA)
Supplies....do	[12]6,679	1,923	[13]1,531	3,713	1,748	[13]1,303	1,890	737	853
Purchased fuel....do	[12]948	250	[13]360	415	206	[13]296	796	458	
Purchased electric energy....do	[12]680	381	[13]391	509	343	[13]327	162		
Contract work....do	[12]1,740	65	28	1,332	64	6	94	45	106
Purchased machinery installed....do	[14]2,387		659	793			(NA)		
Capital expenditures, total....do	[14]2,857	(NA)	(NA)	1,214			(NA)		
Development and exploration of mineral property....do	[14]475		767	454			1,153	(NA)	(NA)
Preparation plant construction....do	[14]272	194		83		(NA)			
Other construction....do	[14]217		(NA)	81			(NA)		
New machinery and equipment....do	[14]1,448	343		368					
Used plant and equipment....do	[14]445	60		228					
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	[14]400	78	50	289		40	39	27	12
Per production worker	151	20	12	156	(NA)	10	8	4	2
Prime movers....1,000	[14]312	34	13	219		10	25	26	12
Electric motors driven by purchased energy....do	[14]88	44	37	70		30	14	1	[15]
Horsepower rating of electric motors driven by energy generated at establishment....do	[14]9	5	1	8		1	11	1	2
Energy used....million kwh equivalent	[14]404	251	[11]541	248		[11]510	(NA)		
Coal....1,000 short tons	[14]9	17	[11]59	9		[11]59	198		
Fuel oils....1,000 barrels	[14]61	29	[11]22	33		[11]8	47		
Gas....million cu.ft	...	5	...	...		...	5	(NA)	(NA)
Electric energy purchased....million kwh	[14]79	42	[11]43	65		[11]39	(NA)		
Electric energy generated and used....do	19	8	1	17		([14])	(NA)		

NA Not available. [1]Excludes data for dimension stone dressing, if any, in conjunction with one dimension granite and 2 dimension sandstone quarries. [2]Excludes data for common clay and shale operations. There were 10 such mines in 1939 with products valued at $50,000. Also, excludes data for crude petroleum and natural gas extraction establishments, if any. [3]Includes data for 1 nonproducing sand and gravel operation. See also footnote 1. [4]Includes data for 2 stone quarries operated as part of lime establishments. Excludes data for crude petroleum and natural gas extraction establishments, if any. [5]Includes data for lime plants producing lime valued at $186,000. [6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry. [7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication. [8]Excludes data for the Uranium-radium-vanadium ores industry. [9]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period. [10]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments. [11]Excludes data for 38 nonproducing establishments. [12]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with the figure for supplies. [13]Figures for fuels and electric energy for 38 nonproducing establishments are included with the figures for supplies. [14]Excludes statistics for crushed stone and clay operations classified in manufactures. [15]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Washington, total		Metal mining			Bituminous coal mining and Crude petroleum and natural gas extraction
		Including operations classified in manufactures	Mineral industries only	Total	Lead and zinc ores	Other metal mining	
1	Number of operating companies	263	242	49	18	31	21
2	Number of establishments	311	287	49	18	31	23
	Number of mines, quarries, and producing oil and gas wells:						
3	1954	299	275	49	18	31	17
4	1939	186	(NA)	47	4	43	64
5	Number of preparation plants	191	190	25	9	16	10
	Value of shipments:[1]						
6	1954.....$1,000	[2]34,998	[2]31,404	[2]8,845	4,247	[2]4,598	4,636
7	1939.....do	[3]13,694	(NA)	4,877	(NA)	(NA)	[4]5,268
8	Value added in mining.....do	[2]25,182	[2]22,346	[2]6,085	2,348	[2]3,737	3,263
9	Number of persons engaged, total	3,447	3,314	813	310	503	840
10	Production and development workers	2,647	2,515	647	249	398	682
11	All other employees	581	581	140	49	91	145
12	Proprietors and firm members	219	218	26	12	14	13
13	Performing manual labor	140	139	19	8	11	10
	Man-hours worked by production and development workers:						
14	1954.....1,000	4,912	4,651	1,416	510	906	1,032
15	1939.....do	[3]6,608	(NA)	[6]1,929	(NA)	(NA)	[6]3,093
	At mines:						
16	Underground.....do	1,538	1,538	808	301	507	690
17	Open-pit.....do	1,260	1,000	5	...	5	33
18	Surface (mine shops, yards, etc.).....do	[8]355	[8]355	346	61	285	281
19	At preparation plants.....do	[8]1,731	[8]1,730	257	148	109	
20	At oil and gas field operations.....do	28	28	xxx	xxx	xxx	28
21	Man-hours spent on development and exploration work (included above).....do	167	166	123	9	114	29
22	Principal expenses designated below, total.....$1,000	25,042	23,721	6,772	3,276	3,496	4,933
23	Wages of production and development workers.....do	11,403	10,840	2,923	1,083	1,840	2,706
24	Salaries of all other employees.....do	3,378	3,378	807	343	464	827
25	Minerals received for preparation.....do	214	214	...	...	...	904
26	Supplies.....do	[9]6,679	5,921	1,917	1,047	870	
	Purchased fuel:						
27	Coal.....do	[9]8	8	8	8	...	...
28	Fuel oil.....do	[9]331	331	65	20	45	15
29	Gas.....do	...	...	...	...	...	...
30	Other fuels.....do	[9]609	609	35	3	32	38
31	Purchased electric energy.....do	[9]680	680	275	112	163	127
32	Contract work.....do	[9]1,740	1,740	742	660	82	316
33	Purchased machinery installed.....do	[10]2,387	2,387	407	276	131	60
34	Capital expenditures, total.....do	[10]2,857	2,857	714	227	487	87
35	Development and exploration of mineral property.....do	[10]475	475	368	85	283	31
36	Preparation plant construction.....do	[10]272	272	46	7	39	3
37	Other construction.....do	[10]217	217	47	4	43	...
38	New machinery and equipment.....do	[10]1,448	1,448	203	120	83	37
39	Used plant and equipment.....do	[10]445	445	50	11	39	16
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000	[10]400	400	207	20	187	29
41	Per production worker	151	159	320	80	470	43
42	Prime movers.....1,000	[10]312	312	164	11	153	11
43	Electric motors driven by purchased energy.....do	[10]88	88	43	9	34	18
44	Horsepower rating of electric motors driven by energy generated at establishment.....do	[10]9	9	7	6	1	1
45	Energy used.....million kwh equivalent	[10]404	404	74	31	43	91
	Produced and used for fuel:						
46	Coal.....1,000 short tons	[10]8	8	...	...	...	8
	Purchased fuel:						
47	Coal.....do	[10]1	1	1	1	...	...
48	Fuel oil.....1,000 barrels	[10]61	61	11	4	7	3
49	Gas.....million cu.ft	...	...	...	...	...	...
50	Electric energy purchased.....million kwh	[10]79	79	38	15	23	15
51	Electric energy generated and used.....do	[10]19	19	17	17	...	...
52	Water intake, including mine water used.....million gallons	[10]5,041	5,041	921	790	131	215
53	Per production worker.....do	1.90	2.00	1.42	3.17	0.33	0.32

NA Not available. xxx Not applicable. [1]See table 1, footnote 7. [2]See table 1, footnote 8. [3]See table 1, footnote 1. [4]Represents data for bituminous coal and contract service operations only. See also footnote 5. [5]Figures for 1 crude petroleum and natural gas establishment, 1 foundry sand establishment, and 1 peat establishment are included with those for Magnesite and brucite and Miscellaneous nonmetallic minerals (except fuels). See also footnote 6. [6]Figures for man-hours at all contract service operations and at nonproducing operations in the Crude petroleum and natural gas extraction industries and for 1 nonproducing sand and gravel establishment are included with those for metal mining.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining											
Total		Dimension stone (including operations classified in manufactures)	Crushed and broken stone			Sand and gravel	Clay, ceramic, and refractory minerals, except Magnesite and brucite		Peat	Magnesite and brucite, Natural abrasives, and Miscellaneous nonmetallic minerals (except fuels and peat)	
Including operations classified in manufactures	Mineral industries only		All stone (including operations classified in manufactures)	Limestone (mineral industries only)	Trap rock		Fire clay (including operations classified in manufactures)	Clay, ceramic, and refractory minerals, n.e.c. (including operations classified in manufactures)			
194	173	6	44	9	16	90	5	18	19	15	1
239	215	6	53	10	19	116	8	22	19	15	2
233	209	6	50	9	18	114	8	22	19	14	3
75	(NA)	3	31	10	9	20	5	10	1	5	4
156	155	1	37	10	18	95	3	3	5	12	5
21,517	17,923	361	7,128	933	2,166	11,863	346	229	154	1,436	6
[3]3,549	(NA)	[3]45	1,481	402	378	[5]895	43	50	([5])	[5]1,035	7
15,834	12,998	329	5,489	723	1,545	8,601	190	117	140	968	8
1,794	1,661	56	481	80	211	1,024	21	25	34	153	9
1,318	1,186	52	425	61	183	668	15	23	12	123	10
296	296	1	27	6	17	246	...	...	1	21	11
180	179	3	29	13	11	110	6	2	21	9	12
111	110	3	17	10	6	64	2	1	17	7	13
2,464	2,203	95	763	111	307	1,285	30	52	22	217	14
[3]1,586	(NA)	[3]44	903	(NA)	174	[5]272	36	39	([5])	[5]292	15
40	40	...	19	...	17	3	9		...	9	16
1,222	962	94	462	64	139	[7]494	19	46	16	91	17
8	8	...	6	6	...	(NA)	2	...	...	...	18
1,194	1,193	1	276	41	151	788	...	6	6	117	19
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
15	14	1	3	...	...	6	...	...	...	5	21
13,337	12,016	288	3,584	460	1,516	7,932	240	204	79	1,010	22
5,774	5,211	248	1,844	232	841	3,092	62	92	35	401	23
1,744	1,744	...	106	17	71	1,529	...	...	3	106	24
		...			...	...		...	...		25
[9]4,072	3,314	25	[9]1,309	164	428	2,221	[9]104	[9]90	4	319	26
...	...	([11])	...	...	...	...	...	...	...	...	27
[9]251	251	1	[9]62	10	39	153	...	...	...	35	28
...	...	...	...	...	...	...	...	...	...	...	29
[9]536	536	10	[9]116	19	86	377	[9]4	[9]3	17	9	30
[9]278	278	4	[9]53	18	27	170	[9]3	[9]1	...	47	31
[9]682	682	...	[9]94	...	24	390	[9]67	[9]18	20	93	32
[10]1,920	1,920	17	[10]254	28	213	1,594	[10]2	...	33	20	33
[10]2,056	2,056	25	249	29	196	1,643	[10]24	...	60	55	34
[10]76	76	8	[10]14	2	...	21	[10]14	...	3	16	35
[10]223	223	...	[10]9	...	2	189	...	...	...	25	36
[10]170	170	...	[10]2	...	2	136	[10]8	...	24	...	37
[10]1,208	1,208	17	[10]78	8	70	1,080	[10]1	...	22	10	38
[10]379	379	...	[10]146	19	122	217	[10]1	...	11	4	39
[10]164	164	1	[10]34	7	23	111	[10]1	([11])	6	11	40
124	138	19	80	115	126	167	66	9	([12])	89	41
[10]137	137	1	[10]29	5	21	93	[10]1	([11])	6	7	42
[10]27	27	([11])	[10]5	2	2	18	...	...	([2])	4	43
[10]1	1	...	...	...	...	1	...	...	...	...	44
[10]239	239	3	[10]55	9	35	155	2	[8]1	4	19	45
...	...	...	...	...	...	...	...	...	...	...	46
...	...	([11])	...	...	...	...	...	...	...	...	47
[10]47	47	([11])	[10]11	2	7	28	...	...	...	8	48
...	...	...	...	...	...	...	...	...	...	...	49
[10]26	26	([11])	[10]7	1	2	14	([11])	([11])	...	5	50
[10]2	2	...	...	...	...	2	([11])	([11])	...	...	51
[9]3,905	3,905	...	[9]29	24	5	2,814	...	...	...	1,062	52
2.96	3.29	...	0.07	0.39	0.03	4.21	...	...	...	8.63	53

[7]Includes man-hours worked on floating equipment. [8]For bituminous coal, man-hours at "Surface (including mine shops and yards)" are included with man-hours "At preparation plant," since 95 percent of the coal shipped was cleaned. [9]See table 1, footnote 12. [10]See table 1, footnote 14. [11]Less than one-half of the unit of measure specified. [12]Not shown, since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Washington, all mineral operations: Including operations in manufactures	311	[2]34,998	[2]25,182	2,647	581	4,912	11,403	3,378	[3]2,412
Mineral industries only	287	[2]31,404	[2]22,346	2,515	581	4,651	10,840	3,378	2,412
Metal mining, total	49	[2]8,845	[2]6,085	647	140	1,416	2,923	807	664
Lead and zinc ores	18	4,247	2,348	249	49	510	1,083	343	216
Other metal mining	31	[2]4,598	[2]3,737	398	91	906	1,840	464	448
Bituminous coal mining and Crude petroleum and natural gas extraction[4]	23	4,636	3,263	682	145	1,032	2,706	827	71
Nonmetallic minerals (except fuels) mining, total: Including operations in manufactures	239	21,517	15,834	1,318	296	2,464	5,774	1,744	[3]1,677
Mineral industries only	215	17,923	12,998	1,186	296	2,203	5,211	1,744	1,677
Dimension stone (including operations in manufactures)	6	361	329	52	1	95	248	...	25
Crushed and broken stone (including operations in manufactures)	53	7,128	5,489	425	27	763	1,844	106	[3]103
Sand and gravel	116	11,863	8,601	668	246	1,285	3,092	1,529	1,426
Fire clay and Clay, ceramic, and refractory minerals, n.e.c. (including operations in manufactures)	30	575	307	38	...	82	154	...	[3]23
Other industries	34	1,590	1,108	135	22	239	436	109	[3]100
COUNTY									
Benton	6	145	119	12	...	22	41	...	...
Chelan	10	3,893	2,975	302	70	655	1,356	339	267
Clark	13	623	380	59	3	105	244	13	10
Sand and gravel	8	500	299	42	3	72	176	13	10
Cowlitz	5	311	169	44	2	56	139	10	21
Franklin	4	138	138	15	...	32	60	...	108
Grant	8	1,138	525	50	13	110	247	151	64
Grays Harbor	6	(NA)	(NA)	[5]40	([5])	(NA)	(NA)	(NA)	(NA)
King (mineral industries only)	51	[6]4,574	[6]2,863	[5]432	([5])	[6]537	[6]1,402	[6]418	[6]174
Bituminous coal mining	5	1,239	874	145	10	252	682	32	...
Crushed and broken stone (mineral industries only)	5	954	708	74	14	156	401	89	9
Sand and gravel	13	1,998	1,040	52	55	96	254	324	83
Clay, ceramic, and refractory minerals (mineral industries only)	10	278	124	8	...	15	31	...	23
Kittitas	8	2,562	2,261	416	28	579	1,512	131	49
Lewis (mineral industries only)	9	[6]554	[6]451	[5]48	([5])	[6]70	[6]203	[6]17	[6]28
Bituminous coal mining	3	208	155	24	...	36	90	...	8
Okanogan	12	523	430	43	8	82	181	14	143
Nonmetallic minerals (except fuels) mining	5	521	394	34	3	66	156	11	88
Pacific	6	199	145	21	4	26	69	3	24
Pend Oreille (mineral industries only)	6	2,424	1,599	192	22	377	814	193	189
Pierce (mineral industries only)	13	2,619	2,359	152	131	306	772	849	331
Skagit (mineral industries only)	8	283	270	30	2	54	93	10	58
Snohomish (mineral industries only)	16	639	556	74	7	131	288	24	126
Sand and gravel	8	481	393	30	5	53	102	19	26
Spokane: Including operations in manufactures	31	2,925	2,041	177	29	337	839	111	(NA)
Mineral industries only	25	2,648	1,891	161	29	308	780	111	264
Stevens, total	25	2,842	1,637	194	44	377	718	239	132
Metal mining	15	1,890	851	81	31	177	352	161	107
Nonmetallic minerals (except fuels) mining	10	970	786	113	13	200	366	78	25
Whatcom (mineral industries only)	8	1,290	1,074	122	5	208	509	25	10
Whitman	4	111	85	8	...	12	24	...	3
Yakima (mineral industries only)	14	979	840	80	4	172	428	17	122

NA Not available. [1]See table 1, footnote 7. [2]See table 1, footnote 8. [3]See table 1, footnote 14. [4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for the latter companies is included with the county data for the Crude petroleum and Natural gas industries. [5]Figures for "All other employees" are included with those for "Production and development workers." [6]Excludes data for 2 establishments in the Crude petroleum and natural gas extraction industries.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Counties	All mineral operations			Metal mining										Bituminous coal mining	
						Gold and silver ores			Ferro-alloy ores, except vanadium			Miscellaneous metal ores			
	Total	Classified in mineral industries	Included in manufactures	Copper ores	Lead and zinc ores	Lode gold	Placer gold	Silver ores	Manganese ores	Molybdenum ores	Tungsten ores	Mercury ores	Uranium-radium-vanadium ores	Bituminous coal	Bituminous coal mining contract services
Washington, total	311	287	24	8	18	7	3	3	1	1	5	1	2	14	2
Asotin	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Benton	6	6	...	...	...	...	3	...	...	...	...	...	...	...	...
Chelan	10	10	...	1	...	1	...	...	...	...	...	...	...	...	...
Clallam	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Clark	12	12	...	...	...	...	...	...	...	...	...	...	...	...	...
Columbia	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Cowlitz	5	5	...	...	...	...	...	...	...	...	...	...	...	...	...
Douglas	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Ferry	3	3	...	...	1	1	...	...	...	...	1	...	...	...	...
Franklin	4	4	...	...	...	...	...	...	...	...	...	...	...	...	...
Grant	8	8	...	...	...	...	...	...	...	...	...	...	...	...	...
Grays Harbor	6	6	...	...	...	...	...	...	1	...	...	...	...	...	...
Island	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Jefferson	4	2	2	...	...	...	...	...	...	...	...	...	...	...	...
King	57	51	6	2	...	...	...	...	...	...	...	...	...	5	...
Kitsap	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Kittitas	8	8	...	...	...	1	...	...	...	...	...	...	...	2	2
Klickitat	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Lewis	10	9	1	...	...	...	...	...	...	...	...	...	...	3	...
Lincoln	2	2	...	...	...	...	...	1	...	1	...	...	...	...	...
Mason	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Okanogan	12	12	...	1	1	2	...	2	...	...	1	...	...	...	...
Pacific	6	6	...	...	...	...	...	...	...	...	...	...	...	...	...
Pend Oreille	7	6	1	...	5	...	...	...	...	...	...	...	...	...	...
Pierce	14	13	1	...	...	...	...	...	...	...	...	...	1	2	...
San Juan	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Skagit	10	8	2	...	1	...	...	...	...	...	...	...	...	...	...
Skamania	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Snohomish	17	16	1	2	...	...	...	...	...	...	...	...	...	...	...
Spokane	31	25	6	...	...	...	...	...	...	...	...	...	...	...	...
Stevens	25	25	...	1	10	1	...	...	...	...	3	...	...	...	...
Thurston	4	4	...	...	...	...	...	...	...	...	...	...	...	1	...
Walla Walla	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Whatcom	10	8	2	1	...	1	...	...	...	...	...	...	...	1	...
Whitman	4	4	...	...	...	...	...	...	...	...	...	...	...	...	...
Yakima	16	14	2	...	...	...	...	...	...	...	...	1	1	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Counties	Crude petroleum and natural gas extraction[1]		Nonmetallic minerals (except fuels) mining										
			Dimension stone				Crushed and broken stone						
			Granite		Trap rock	Sandstone	Limestone		Granite	Marble	Trap rock	Stone, n.e.c.	
	Crude petroleum and natural gas	Oil and gas field contract services	Classified in mineral industries	Included in manufactures			Classified in mineral industries	Included in manufactures				Classified in mineral industries	Included in manufactures
Washington, total	6	1	1	1	1	3	10	7	5	5	19	6	1
Asotin	...		...	...	...	...	...	...	...	...	1	...	...
Benton	...		...	...	...	...	...	...	...	...	...	...	...
Chelan	...		...	...	...	1	...	...	...	...	...	...	...
Clallam	...		...	...	...	...	...	...	...	...	...	...	...
Clark	...		...	...	...	...	...	...	...	...	1	...	...
Columbia	...		...	...	...	...	...	...	...	...	...	...	...
Cowlitz	...		...	...	...	...	...	...	...	...	2	1	...
Douglas	...		...	...	...	...	...	...	...	...	...	...	...
Ferry	...		...	...	...	...	...	...	...	...	...	...	...
Franklin	...		...	...	...	...	...	...	...	...	1	...	...
Grant	...		...	...	...	...	...	...	...	...	...	...	...
Grays Harbor	2		...	...	...	...	...	...	...	...	...	...	...
Island	...		...	...	...	...	...	...	...	...	...	...	...
Jefferson	...		...	...	...	...	...	1	...	...	1	...	...
King	2		...	...	...	...	1	2	1	...	2	1	...
Kitsap	...	(NA)	...	...	...	...	...	...	...	...	...	...	...
Kittitas	...		...	...	...	1	...	...	...	...	...	...	...
Klickitat	...		...	...	...	...	...	...	...	...	...	...	...
Lewis	2		...	...	...	...	...	...	...	...	2	...	...
Lincoln	...		...	...	...	...	...	...	...	...	...	...	...
Mason	...		...	...	...	...	...	...	...	...	...	...	...
Okanogan	...		...	...	...	...	1	...	...	...	...	...	...
Pacific	...		...	...	1	...	1	...	...	...	1	2	...
Pend Oreille	...		...	...	...	...	...	1	...	...	...	...	...
Pierce	...		...	...	...	1	...	...	...	...	1	...	...
San Juan	...		...	...	...	...	2	...	...	...	...	...	...
Skagit	...		...	...	...	...	...	1	...	...	...	...	...
Skamania	...		...	...	...	...	...	...	...	...	...	1	...
Snohomish	...		...	...	...	...	2	...	2	...	...	...	1
Spokane	...		...	1	...	...	...	1	2	...	4	...	...
Stevens	...		...	...	...	...	1	...	...	5	...	...	...
Thurston	...		...	...	...	...	...	...	...	...	...	...	...
Walla Walla	...		...	...	...	...	...	...	...	...	...	...	...
Whatcom	...		...	...	...	...	2	1	...	...	...	1	...
Whitman	...		...	...	...	...	...	...	...	...	2	...	...
Yakima	...		1	...	...	...	...	...	...	...	1	...	...

See footnotes at end of table.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Counties	Nonmetallic minerals (except fuels) mining—Continued													
	Sand and gravel			Clay, ceramic, and refractory minerals					Natural abrasives, except sand, n.e.c.	Miscellaneous nonmetallic minerals (except fuels)				
				Fire clay		Magnesite and brucite	Clay, ceramic, and refractory minerals, n.e.c.							
	Common sand and gravel	Glass sand	Foundry sand	Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in wholesale trade		Gypsum	Pumice and pumicite	Talc, soapstone, and pyrophyllite	Peat	Nonmetallic minerals, n.e.c.
Washington, total	113	1	2	7	1	1	8	14	1	2	4	4	19	3
Asotin	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Benton	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Chelan	4	...	...	...	...	...	...	...	...	...	3	...	...	...
Clallam	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Clark	7	...	1	...	...	...	2	...	...	...	1	...	...	...
Columbia	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Cowlitz	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Douglas	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Ferry	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Franklin	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Grant	7	...	...	...	...	...	...	...	...	...	...	...	...	1
Grays Harbor	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Island	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Jefferson	1	...	...	...	...	...	...	1	...	...	...	...	...	...
King	11	1	1	5	...	...	5	4	...	...	...	1	13	...
Kitsap	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Kittitas	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Klickitat	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Lewis	2	...	...	...	...	...	...	1	...	...	...	...	...	...
Lincoln	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mason	2	...	...	...	...	...	...	...	...	...	...	...	1	...
Okanogan	3	...	...	...	...	...	...	...	...	1	...	...	...	...
Pacific	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Pend Oreille	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Pierce	8	...	...	...	...	...	...	1	...	...	...	...	...	...
San Juan	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Skagit	4	...	...	...	...	...	...	1	...	...	...	3	...	...
Skamania	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Snohomish	8	...	...	...	...	...	...	...	...	...	...	...	2	...
Spokane	13	...	...	2	1	...	1	3	1	1	...	...	1	...
Stevens	2	...	...	...	...	1	...	...	...	...	...	...	...	1
Thurston	1	...	...	...	...	...	...	...	...	...	...	...	2	...
Walla Walla	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Whatcom	2	...	...	...	...	...	...	1	...	...	...	...	...	...
Whitman	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Yakima	10	...	...	...	...	...	...	2	...	...	...	...	...	...

NA Not available.

[1]See table 3, footnote 4.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Washington, all mineral operations:												
Including operations classified in manufactures	311	68	125	54	29	25	5	3	2	...	...	...
Mineral industries only	287	66	112	48	28	23	5	3	2	...	...	...
Metal mining, total	49	20	15	4	3	4	1	1	1	...	...	...
Copper ores	8	3	2	...	2	...	...	...	1	...	...	...
Lead and zinc ores:												
Valued chiefly for lead	8	6	1	...	...	...	...	1	...	...	...	...
Valued chiefly for zinc	10	4	3	...	...	3	...	...	...	...	...	...
Gold and silver ores:												
Lode gold	7	2	2	1	...	1	1	...	...	...	...	...
Placer gold	3	3	...	...	...	...	...	...	...	...	...	...
Silver ores	3	...	2	1	...	...	...	...	...	...	...	...
Ferro-alloy ores, except vanadium:												
Manganese ores	1	1	...	...	...	...	...	...	...	...	...	...
Molybdenum ores	1	1	...	...	...	...	...	...	...	...	...	...
Tungsten ores	5	...	3	1	1	...	...	...	...	...	...	...
Miscellaneous metal ores:												
Mercury ores	1	...	1	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	2	...	1	1	...	...	...	...	...	...	...	...
Bituminous coal mining, total	16	...	5	4	2	1	2	1	1	...	...	...
Bituminous coal	14	...	4	3	2	1	2	1	1	...	...	...
Bituminous coal mining contract services	2	...	1	1	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	7	1	3	...	1	2	...	...	...	...	...	...
Crude petroleum and natural gas	6	1	2	...	1	2	...	...	...	...	...	...
Oil and gas field contract services, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	239	47	102	46	23	18	2	1	...	...	...	...
Mineral industries only	215	45	89	40	22	16	2	1	...	...	...	...
Dimension stone:												
Granite:												
Classified in mineral industries	1	1	...	...	...	...	...	...	...	...	...	...
Included in manufactures	1	...	1	...	...	...	...	...	...	...	...	...
Trap rock	1	...	1	...	...	...	...	...	...	...	...	...
Sandstone	3	...	2	...	...	1	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	10	...	6	2	1	1	...	...	...	...	...	...
Included in manufactures	7	...	1	3	1	2	...	...	...	...	...	...
Granite	5	1	2	2	...	...	...	...	...	...	...	...
Marble	5	...	4	...	1	...	...	...	...	...	...	...
Trap rock	19	2	5	4	4	4	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	6	...	3	2	...	1	...	...	...	...	...	...
Included in wholesale trade	1	...	1	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	113	13	50	24	15	9	1	1	...	...	...	...
Glass sand	1	...	1	...	...	...	...	...	...	...	...	...
Foundry sand	2	2	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	7	6	...	1	...	...	...	...	...	...	...	...
Included in manufactures	1	...	...	1	...	...	...	...	...	...	...	...
Magnesite and brucite	1	...	...	...	...	...	1	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	8	5	3	...	...	...	...	...	...	...	...	...
Included in manufactures	14	2	10	2	...	...	...	...	...	...	...	...
Natural abrasives, except sand, n.e.c.	1	...	...	1	...	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels) mining:												
Gypsum	2	...	...	2	...	...	...	...	...	...	...	...
Pumice and pumicite	4	3	1	...	...	...	...	...	...	...	...	...
Talc, soapstone, and pyrophyllite	4	1	2	1	...	...	...	...	...	...	...	...
Peat	19	10	9	...	...	...	...	...	...	...	...	...
Nonmetallic minerals, n.e.c.	3	1	...	1	1	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Washington, total	2,515	[5]22,346	3,869	1.54	173	3,835	1,172	1,340	6,457	4	45	39	12
Metal mining, total	647	[5]6,085	918	1.42	151	898	3	209	1,028	15	84	...	1
Lead and zinc ores	249	2,348	790	3.17	336	780	...	154	861	17	83	...	...
Other metal ores	398	[5]3,737	128	0.32	34	118	3	55	167	...	93	...	7
Bituminous coal mining and Crude petroleum and natural gas extraction[2]	682	3,263	166	0.24	51	157	49	80	381	4	1	40	[3]55
Nonmetallic minerals (except fuels) mining, total	1,186	12,998	2,785	2.35	214	2,780	1,120	1,051	5,048	1	35	51	13
Crushed and broken limestone	61	723	24	0.39	33	24	...	...	24	...	...	100	...
Crushed and broken trap rock	183	1,545	5	0.03	3	1	...	...	5	20	...	...	[3]80
Sand and gravel	668	8,601	2,745	4.11	319	2,745	69	...	2,902	1	35	51	[4]13
Other industries	274	2,129	11	0.04	5	10	1,120	1,051	2,117	9	...	...	91

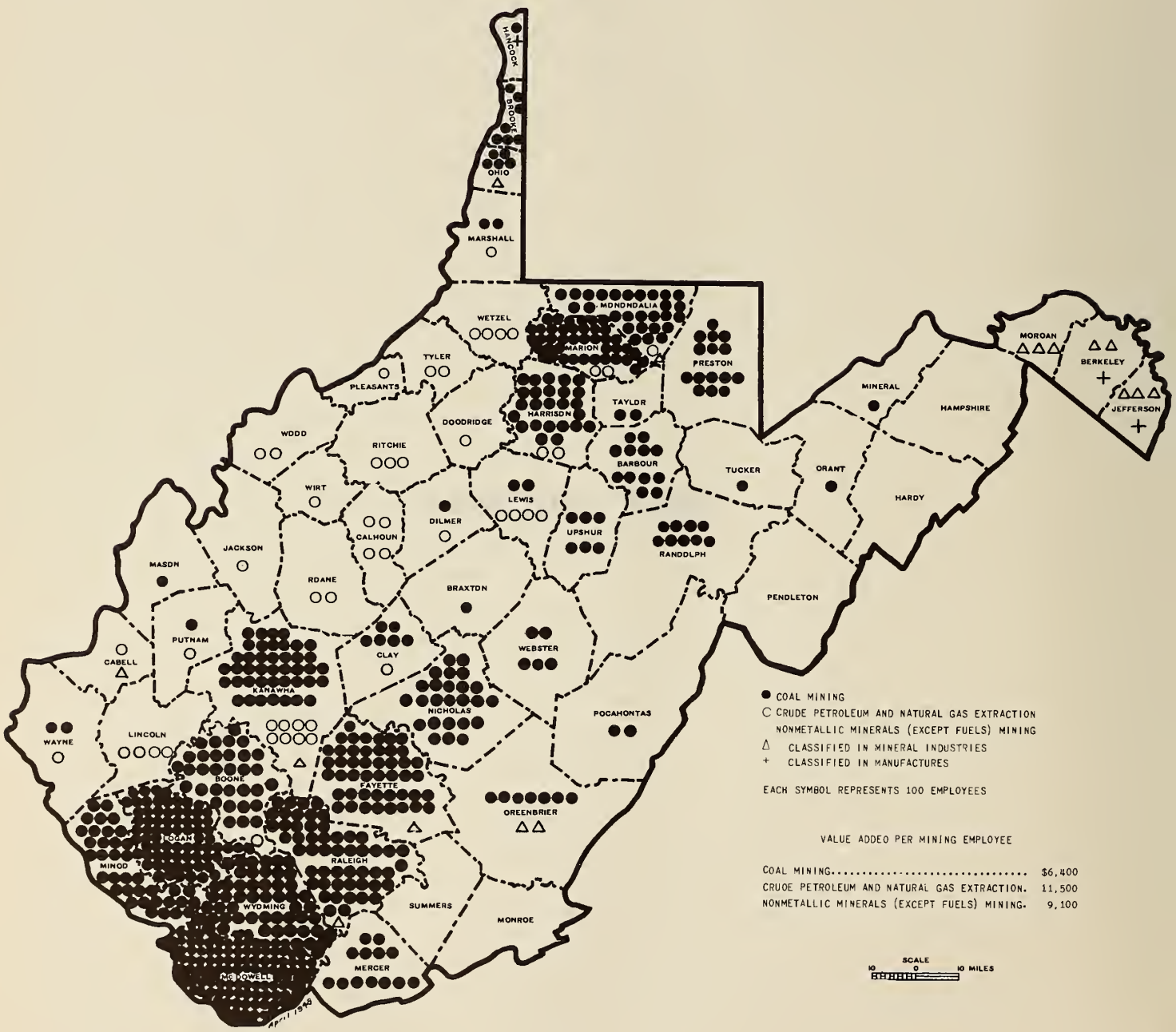
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]No water use was reported by the Crude petroleum and natural gas extraction industries.
[3]Represents "not specified."
[4]Includes "not specified" of 11 percent for Sand and gravel.
[5]See table 1, footnote 8.

WEST VIRGINIA

147-1

MINING IN WEST VIRGINIA: 1954

Rank among States:
Employment, 3
Value of shipments, 6



VALUE ADDED PER MINING EMPLOYEE

COAL MINING	$6,400
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	11,500
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	9,100

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the crude petroleum and natural gas extraction industries and common clay and shale and contract service operations		
	1954	1939[1]	1919[2]	1909[2]	1902[3]	1954	1939[4]	1929[5]
Number of operating companies	2,070	1,095	(NA)	[6]815	[6]5,205	1,162	[6]611	(NA)
Number of establishments	2,339	(NA)	1,722	908	(NA)	1,372	(NA)	740
Number of mines and quarries	1,426	796	1,328	727	839	1,424	783	891
Number of oil and gas wells producing at end of year	23,520	26,137	27,363	15,146	12,036	xxx	xxx	xxx
Number of preparation plants	305	239	(NA)	(NA)	(NA)	263	239	(NA)
Value of shipments[7]...$1,000	739,381	224,266	295,607	76,288	48,378	661,839	196,364	223,931
Value added in mining...do	515,807	187,547	238,077	57,845	34,546	449,682	164,512	189,093
Number of persons engaged, total	77,657	108,062	110,364	77,911	32,681	70,256	101,176	106,747
Production and development workers	68,698	102,302	100,830	73,474	[8]30,053	63,336	96,751	101,422
All other employees	6,375	4,958	7,858	3,519	2,628	5,810	4,108	[9]5,156
Proprietors and firm members	2,584	802	1,676	918	(NA)	1,110	317	169
Performing manual labor	1,037	336	124	81	(NA)	743	208	(NA)
Man-hours worked by production and development workers...1,000	115,644	156,344	(NA)	(NA)	(NA)	106,124	145,253	(NA)
Principal expenses designated below, total...$1,000	545,162	176,546	192,094	58,312	33,780	504,982	162,544	176,175
Wages of production and development workers...do	274,014	128,978	119,597	36,027	17,497	257,811	121,477	128,906
Salaries of all other employees...do	34,731	10,849	14,967	3,842	2,451	32,403	9,215	[9]12,431
Minerals received for preparation...do	58,982	(NA)	[10]5,872	[10]894	(NA)	56,880	(NA)	(NA)
Supplies...do	131,210	25,370	40,804	11,759		120,535	23,570	25,209
Fuel[11]...do	4,457	1,802	3,922	1,213	8,593	3,444	781	923
Purchased electric energy...do	14,996	7,147	2,987			14,840	7,121	8,412
Contract work...do	26,772	2,400	3,945	4,577	5,239	19,069	380	294
Purchased machinery installed...do	46,161		(NA)			41,535		8,272
Capital expenditures, total...do	59,004	(NA)	(NA)			44,146	(NA)	(NA)
Development and exploration of mineral property...do	8,579		17,649	(NA)	(NA)	779		2,678
Preparation plant construction...do	12,107	1,031				12,084	969	
Other construction...do	4,835		(NA)			3,663		(NA)
New machinery and equipment...do	29,594	8,549				24,184	6,775	
Used plant and equipment...do	3,889	682				3,436	550	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	1,946	934	704	417	244	1,610	800	671
Per production worker	28	9	7	6	8	25	8	7
Prime movers...1,000	804	262	486	411	244	479	132	108
Electric motors driven by purchased energy...do	1,142	672	218	6	[12]	1,131	668	563
Horsepower rating of electric motors driven by energy generated at establishment...do	24	113	95	89	17	23	111	92
Energy used...million kwh equivalent	5,885	5,662	(NA)			3,757	3,649	4,922
Coal[13]...1,000 short tons	208	416	1,158			208	396	567
Fuel oils[13]...1,000 barrels	401	19	524	(NA)	(NA)	361	18	2
Gas[13]...million cu.ft	6,455	6,028	12,151			198	21	88
Electric energy purchased...million kwh	1,175	558	(NA)			1,162	556	536
Electric energy generated and used...do	29	127	(NA)			19	121	114

NA Not available. xxx Not applicable. [1]Excludes data for dimension stone dressing, if any, in conjunction with one sandstone quarry. In "Comparative statistics for all operations" includes data for one or two oil and gas field hauling operations, with receipts for services amounting to less than $45,000; such operations were not classified in the mineral industries for 1954. [2]Excludes data for sand, gravel, common clay, and shale operations; and for limestone quarries operated as part of cement and lime plants. In 1939, the value of products of such establishments (except cement plant quarries) was $2,503,000. [3]Excludes data for sand, gravel, common clay, and shale operations. Includes data for lime plants producing lime valued at $182,000. [4]Excludes data for 3 nonproducing coal mines. See also footnote 1. [5]Excludes data for one nonproducing establishment. [6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry. [7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication. [8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period. [9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments. [10]Includes natural gas purchased for resale. [11]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat. [12]Less than one-half of the unit of measure specified. [13]Includes data for fuels produced and used at the same establishment for power and heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	West Virginia, total		Bituminous coal mining			Crude petroleum and natural gas extraction		
		Including operations classified in manufactures	Mineral industries only	Total	Bituminous coal	Bituminous coal mining contract services	Total	Crude petroleum	Natural gas
1	Number of operating companies	2,070	2,053	1,139	1,099	44	860	283	439
2	Number of establishments	2,339	2,322	1,338	1,294	44	914	287	447
	Number of mines, quarries, and producing oil and gas wells:								
3	1954	24,946	24,936	1,344	1,344	xxx	23,520	9,008	14,095
4	1939	26,933	(NA)	724	724	xxx	26,137	(NA)	(NA)
5	Number of preparation plants	305	305	199	199	xxx	41	xxx	xxx
	Value of shipments:[1]								
6	1954 ..... $1,000	739,381	736,026	641,900	637,357	4,543	72,456	8,494	44,846
7	1939 ..... do	224,266	(NA)	190,745	190,668	77	27,825	[2]23,020	([2])
8	Value added in mining ..... do	515,807	513,492	434,141	431,087	3,054	[5]62,760	7,224	41,301
9	Number of persons engaged, total	77,657	77,299	68,540	68,118	422	6,878	1,910	3,161
10	Production and development workers	68,698	68,340	61,873	61,518	355	4,909	1,227	2,141
11	All other employees	6,375	6,375	5,568	5,538	30	533	113	356
12	Proprietors and firm members	2,584	2,584	1,099	1,062	37	1,436	570	664
13	Performing manual labor	1,037	1,037	756	726	30	264	107	87
	Man-hours worked by production and development workers:								
14	1954 1,000	115,644	114,929	102,860	102,276	584	8,769	2,012	3,574
15	1939 ..... do	156,344	(NA)	141,897	141,845	52	11,016	[2]9,032	([2])
	At mines:								
16	Underground ..... do	81,056	81,055	80,770	80,770	...	xxx	xxx	xxx
17	Open-pit ..... do	5,528	4,814	3,664	3,179	485	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.) ..... do	[10]400	[10]400	18,426	18,327	99	xxx	xxx	xxx
19	At preparation plants ..... do	[10]20,698	[10]20,698			...	807	xxx	xxx
20	At oil and gas field operations	7,962	7,962	xxx	xxx	xxx	7,962	2,012	3,574
21	Man-hours spent on development and exploration work (included above) ..... do	2,905	2,905	300	300	...	2,578	88	476
22	Principal expenses designated below, total $1,000	545,162	542,842	494,610	491,550	3,060	[5]36,705	5,998	18,332
23	Wages of production and development workers ..... do	274,014	272,734	252,729	251,318	1,411	14,614	3,373	5,980
24	Salaries of all other employees ..... do	34,731	34,731	31,213	31,083	130	2,197	362	1,591
25	Minerals received for preparation ..... do	58,982	58,982	56,880	56,880	...	[5]11,641	xxx	xxx
26	Supplies ..... do	131,210	130,170	117,355	116,446	909		974	4,494
	Purchased fuel:								
27	Coal ..... do	219	219	9	9	...	...	...	...
28	Fuel oil ..... do	2,139	2,139	1,837	1,627	210	23	3	5
29	Gas ..... do	333	333	41	41	...	292	44	7
30	Other fuels ..... do	1,766	1,766	1,234	1,130	104	378	71	127
31	Purchased electric energy ..... do	14,996	14,996	14,273	14,273	...	155	53	25
32	Contract work ..... do	26,772	26,772	19,039	18,743	296	7,405	1,118	6,103
33	Purchased machinery installed ..... do	46,161	46,161	39,940	39,616	324	4,286	329	3,053
34	Capital expenditures, total ..... do	59,004	59,004	42,849	42,495	354	14,484	1,322	10,269
35	Development and exploration of mineral property ..... do	8,579	8,579	779	779	...	7,800	741	5,714
36	Preparation plant construction ..... do	12,107	12,107	11,744	11,744	...	19	...	...
37	Other construction ..... do	4,835	4,835	3,664	3,591	73	1,099	146	932
38	New machinery and equipment ..... do	29,594	29,594	23,302	23,172	130	5,266	383	3,498
39	Used plant and equipment ..... do	3,889	3,889	3,360	3,209	151	300	52	125
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	1,946	1,946	1,554	1,519	35	301	126	66
41	Per production worker	28	28	25	25	99	61	103	31
42	Prime movers 1,000	804	804	457	423	34	291	124	61
43	Electric motors driven by purchased energy ..... do	1,142	1,142	1,097	1,096	1	10	2	5
44	Horsepower rating of electric motors driven by energy generated at establishment ..... do	24	24	22	22	...	1	...	([5])
45	Energy used ..... million kwh equivalent	5,885	5,885	3,416	3,332	84	2,042	470	420
	Produced and used for fuel:								
46	Coal ..... 1,000 short tons	175	175	175	175	...	xxx	xxx	xxx
47	Crude petroleum ..... 1,000 barrels	2	2	xxx	xxx	xxx	2	2	...
48	Natural gas ..... million cu.ft	5,054	5,054	xxx	xxx	xxx	5,054	1,207	1,222
	Purchased fuels:								
49	Coal ..... 1,000 short tons	33	33	1	1	...	...	...	...
50	Fuel oil ..... 1,000 barrels	399	399	338	304	34	4	([9])	1
51	Gas ..... million cu.ft	1,401	1,401	196	196	...	1,203	243	27
52	Electric energy purchased ..... million kwh	1,175	1,175	1,118	1,118	...	13	3	2
53	Electric energy generated and used ..... do	29	29	15	15	...	10	...	(D)
54	Water intake, including mine water used ..... million gallons	19,882	19,882	7,911	7,911	...	7,469	283	86
55	Per production worker ..... do	0.29	0.29	0.13	0.13	...	1.52	0.23	0.04

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. xxx Not applicable. [1]See table 1, footnote 7. [2]Figures for the Natural gas industry are included with those for the Crude petroleum industry. [3]See table 1, footnote 1. [4]Figures for one foundry sand operation are included with those for "Other industries". [5]No data were obtained on the value of gas received for processing at natrual gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction—Con.				Nonmetallic minerals (except fuels) mining							
	Oil and gas field contract services			Total		Crushed and broken stone					
Natural gas liquids	Drilling oil and gas wells	Building, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Including operations classified in manufactures	Mineral industries only	All stone (including operations classified in manufactures)	Limestone (mineral industries only)	Sand and gravel	Fire clay (including operations classified in manufactures)	Other industries (including operations classified in manufactures	
8	96	8	34	75	58	32	24	27	5	11	1
41	97	8	34	87	70	38	27	33	5	11	2
xxx	409	...	8	82	72	40	27	33	5	4	3
xxx	(NA)	(NA)	(NA)	72	(NA)	25	(NA)	22	7	18	4
41	xxx	xxx	xxx	65	65	33	26	30	1	1	5
10,512	7,192	98	1,314	25,025	21,670	14,360	8,824	8,884	1,124	657	6
3,396	1,218	65	[3]126	5,696	(NA)	2,443	(NA)	[4]2,091	412	[4]750	7
([5])	6,449	96	920	18,906	16,591	10,417	6,538	7,107	959	423	8
430	1,123	47	207	2,239	1,881	1,258	925	781	93	107	9
406	937	38	160	1,916	1,558	1,125	807	601	87	103	10
24	29	...	11	274	274	112	103	156	4	2	11
...	157	9	36	49	49	21	15	24	2	2	12
...	58	2	10	17	17	4	4	11	2	...	13
807	2,033	39	304	4,015	3,300	2,327	1,630	1,340	173	175	14
1,275	644	38	[3]27	3,431	(NA)	1,869	(NA)	[4]955	248	[4]359	15
xxx	xxx	xxx	xxx	286	285	285	285	...	...	1	16
xxx	xxx	xxx	xxx	1,864	1,150	1,122	550	[6]431	162	149	17
xxx	xxx	xxx	xxx	301	301	301	291	(NA)	...	...	18
807	xxx	xxx	xxx	1,564	1,564	619	504	909	11	25	19
...	2,033	39	304	xxx	xxx	xxx	xxx	xxx	xxx	xxx	20
...	1,963	39	12	27	27	27	...	...	...	...	21
[5]3,612	5,676	66	919	13,847	11,527	8,437	5,604	4,448	539	423	22
1,767	2,952	62	480	6,671	5,391	4,010	2,621	2,117	360	184	23
126	75	...	43	1,321	1,321	615	550	689	16	1	24
[5]1,451	xxx	xxx	xxx	...	...	...	...	(NA)	...	...	25
	2,270	2	348	[7]4,316	3,276	[7]2,937	1,677	1,046	[7]106	[7]227	26
...	...	...	...	[7]210	210	[7]21	21	189	([9])	...	27
...	10	...	5	[7]279	279	[7]150	106	129	...	...	28
196	45	...	([9])	([9])	([9])	...	...	([9])	...	...	29
...	138	1	41	[7]154	154	[7]98	59	49	...	7	30
72	5	...	...	[7]568	568	[7]343	341	220	[7]4	[7]1	31
...	181	1	2	[7]328	328	[7]263	229	9	[7]53	[7]3	32
372	455	...	77	[8]1,935	1,935	[8]1,126	487	767	[8]22	[8]20	33
451	2,361	2	79	[8]1,671	1,671	[8]995	634	632	[8]20	[8]24	34
...	1,345	...	...	...	...	...	...	...	...	...	35
19	...	...	...	[8]344	344	[8]311	285	13	[8]16	[8]4	36
...	909	2	63	[8]72	72	[8]7	7	65	...	...	37
432		...		[8]1,026	1,026	[8]526	309	478	[8]4	[8]18	38
...	107	...	16	[8]229	229	[8]151	33	76	...	2	39
49	49	...	11	[8]91	91	[8]65	56	25	[8]1	([9])	40
121	52	...	69	47	58	58	69	43	11	xxx	41
47	48	...	11	[8]56	56	[8]39	31	17	...	([9])	42
2	1	...	...	[8]35	35	[8]26	25	8	[8]1	([9])	43
1	...	...	...	[8]1	1	...	...	1	...	...	44
1,042	97	([9])	13	[8]427	427	[8]129	100	296	...	2	45
xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	46
...	...	...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	47
2,621	4	...	...	xxx	xxx	xxx	xxx	xxx	xxx	xxx	48
...	...	...	...	[8]32	32	[8]3	3	29	([9])	...	49
...	2	...	1	[8]57	57	[8]32	21	25	...	...	50
740	189	...	4	[8]2	2	...	...	2	...	...	51
8	([9])	...	...	[8]44	44	[8]26	26	18	([9])	([9])	52
(D)	...	...	...	[8]4	4	[8]1	...	3	...	...	53
7,078	22	...	...	[8]4,502	4,502	[8]969	969	3,533	...	...	54
17.43	0.02	...	...	2.35	2.89	0.86	1.20	5.88	...	...	55

preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown for these industries. [6]Includes man-hours worked on floating equipment. [7]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figures for supplies. [8]Excludes figures for crushed stone and clay operations classified in manufactures. [9]Less than one-half of the unit of measure specified. [10]For "Bituminous coal" man-hours at surface are included with man-hours at preparation plants, since 60 percent of the coal shipped was mechanically cleaned.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
West Virginia, all mineral operations:									
Including operations in manufactures	2,339	739,381	515,807	68,698	6,375	115,644	274,014	34,731	[2]55,115
Mineral industries only:									
Including crude petroleum and natural gas extraction	2,322	736,026	513,492	68,340	6,375	114,929	272,734	34,731	55,115
Excluding crude petroleum and natural gas extraction	1,408	663,570	450,732	63,431	5,842	106,160	258,120	32,534	40,331
Bituminous coal mining	1,338	641,900	434,141	61,873	5,568	102,860	252,729	31,213	39,489
Crude petroleum and natural gas extraction, total	914	72,456	[3]62,760	4,909	533	8,769	14,614	2,197	14,184
Crude petroleum and natural gas[4]	734	53,340	48,525	3,368	469	5,586	9,353	1,953	11,414
Natural gas liquids	41	10,512	([3])	406	24	807	1,767	126	451
Oil and gas field contract services[5]	139	8,604	7,465	1,135	40	2,376	3,494	118	2,319
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	87	25,025	18,906	1,916	274	4,015	6,671	1,321	[2]1,442
Mineral industries only	70	21,670	16,591	1,558	274	3,300	5,391	1,321	1,442
Crushed and broken stone (including operations in manufactures)	38	14,360	10,417	1,125	112	2,327	4,010	615	[2]844
Sand and gravel	33	8,884	7,107	601	156	1,340	2,117	689	556
Dimension stone and Clay, ceramic, and refractory minerals (including operations in manufactures)	16	1,781	1,382	190	6	348	544	17	[2]42
COUNTY									
Barbour (mineral industries only)	40	(NA)	(NA)	[6]1,154	([6])	1,683	(NA)	(NA)	(NA)
Bituminous coal	37	12,535	8,248	1,007	119	1,643	4,011	672	537
Berkeley (mineral industries only)	5	2,770	1,735	257	28	494	874	215	169
Boone	62	(NA)	(NA)	[6]3,248	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	40	29,987	20,915	2,842	290	4,764	12,312	1,646	2,134
Braxton, total	19	(NA)	(NA)	[6]87	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	8	320	168	56	5	77	123	21	60
Crude petroleum and natural gas[7]	11	(NA)	(NA)	[6]26	([6])	(NA)	(NA)	(NA)	(NA)
Brooke	25	(NA)	(NA)	[6]700	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	19	5,264	4,198	611	61	1,003	2,391	369	188
Cabell (mineral industries only):									
Including crude petroleum and natural gas	39	(NA)	(NA)	[6]160	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	3	737	507	77	8	193	252	52	64
Calhoun	67	(NA)	(NA)	[6]295	([6])	(NA)	(NA)	(NA)	(NA)
Clay, total	27	(NA)	(NA)	[6]739	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	6	3,063	2,377	613	20	821	2,206	73	25
Crude petroleum and natural gas extraction[7]	21	(NA)	(NA)	[6]106	([6])	(NA)	(NA)	(NA)	(NA)
Doddridge	33	(NA)	(NA)	[6]99	([6])	(NA)	(NA)	(NA)	(NA)
Fayette	106	(NA)	(NA)	[6]4,709	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	100	33,052	24,992	4,248	363	7,111	17,694	2,287	1,773
Gilmer, total	45	(NA)	(NA)	[6]153	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	12	215	155	53	6	76	92	18	5
Crude petroleum and natural gas extraction[7]	33	(NA)	(NA)	[6]98	([6])	(NA)	(NA)	(NA)	(NA)
Grant	15	(NA)	(NA)	[6]144	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	12	572	283	127	5	192	280	16	9
Greenbrier	73	(D)	(D)	[6]916	([6])	(D)	(D)	(D)	(D)
Bituminous coal	70	5,897	4,023	676	37	1,253	2,957	306	175
Hancock (mineral industries only)	15	(NA)	(NA)	[6]130	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	5	2,366	418	85	4	143	282	15	...
Harrison (mineral industries only), total	145	(NA)	(NA)	[6]2,609	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	114	30,254	21,192	2,280	189	3,837	8,449	1,070	2,089
Crude petroleum and natural gas extraction[7]	31	(NA)	(NA)	[6]140	([6])	(NA)	(NA)	(NA)	(NA)
Jackson	29	(NA)	(NA)	[6]85	([6])	(NA)	(NA)	(NA)	(NA)
Jefferson (mineral industries only)	5	3,047	2,270	218	35	409	722	173	95
Kanawha (mineral industries only), total	127	(NA)	(NA)	[6]4,900	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining	74	38,968	28,237	3,713	420	6,725	15,552	1,973	2,216
Crude petroleum and natural gas[7]	39	(NA)	(NA)	[6]541	([6])	(NA)	(NA)	(NA)	(NA)
Natural gas liquids	9	2,205	1,917	160	10	321	700	48	116
Nonmetallic minerals (except fuels) mining	5	(D)	(D)	51	5	(D)	(D)	(D)	(D)

See footnotes at end of table.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Lewis (mineral industries only), total...	31	(NA)	(NA)	[6]464	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining.....	13	2,443	1,147	147	6	257	439	8	480
Crude petroleum and natural gas extraction[7].....	18	(NA)	(NA)	[6]311	([6])	(NA)	(NA)	(NA)	(NA)
Lincoln (mineral industries only):									
Including crude petroleum and natural gas.....	55	(NA)	(NA)	348	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas.....	9	773	799	80	4	117	170	14	259
Crude petroleum and natural gas[7].....	46	(NA)	(NA)	[6]264	([6])	(NA)	(NA)	(NA)	(NA)
Logan, total.....	70	(NA)	(NA)	[6]7,453	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal mining.....	60	72,930	54,328	6,850	553	11,517	30,774	3,471	2,474
Crude petroleum and natural gas[7].....	10	(NA)	(NA)	[6]50	([6])	(NA)	(NA)	(NA)	(NA)
McDowell.....	135	143,179	71,810	10,838	976	18,369	45,854	5,852	13,749
Marion.....	59	(NA)	(NA)	[6]4,271	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	26	41,640	32,759	3,791	297	5,978	15,284	1,951	4,866
Marshall.....	14	(NA)	(NA)	[6]209	([6])	(NA)	(NA)	(NA)	(NA)
Mason.....	13	(NA)	(NA)	[6]122	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	10	1,119	525	99	20	161	308	83	43
Mercer (mineral industries only), total..	54	10,055	6,918	1,296	89	1,920	4,563	518	503
Bituminous coal mining.....	51	9,721	6,467	1,264	87	1,840	4,432	513	302
Crushed and broken stone.....	3	334	451	32	2	80	131	5	201
Mineral (Bituminous coal only).....	9	278	231	55	1	77	153	3	14
Mingo.....	47	(NA)	(NA)	[6]3,717	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	35	30,975	24,126	3,379	307	5,414	14,139	1,319	2,247
Monongalia.....	87	(NA)	(NA)	[6]2,952	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	67	32,224	22,000	2,495	222	4,215	10,427	1,368	791
Crude petroleum and natural gas extraction[7].....	17	(NA)	(NA)	[6]107	([6])	(NA)	(NA)	(NA)	(NA)
Nicholas.....	60	(NA)	(NA)	[6]2,570	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	57	20,890	16,488	2,402	160	4,002	9,801	827	1,022
Ohio.....	5	(NA)	(NA)	[6]621	([6])	(NA)	(NA)	(NA)	(NA)
Pleasants.....	47	(NA)	(NA)	[6]91	([6])	(NA)	(NA)	(NA)	(NA)
Pocahontas.....	7	1,571	1,289	243	6	438	1,048	20	25
Preston (mineral industries only).....	100	(NA)	(NA)	[6]1,530	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	94	8,593	5,693	1,422	88	2,152	3,628	286	300
Putnam, total.....	37	(NA)	(NA)	[6]124	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	16	291	235	57	...	90	129	...	32
Crude petroleum and natural gas[7].....	21	(NA)	(NA)	[6]67	([6])	(NA)	(NA)	(NA)	(NA)
Raleigh.....	111	(NA)	(NA)	[6]5,231	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	103	36,317	28,076	4,780	391	7,537	18,623	2,147	558
Randolph.....	27	(NA)	(NA)	[6]953	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	18	5,482	4,305	794	78	1,240	2,927	465	196
Ritchie.....	105	(NA)	(NA)	[6]242	([6])	(NA)	(NA)	(NA)	(NA)
Roane.....	44	(NA)	(NA)	[6]156	([6])	(NA)	(NA)	(NA)	(NA)
Taylor.....	24	(NA)	(NA)	[6]249	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	21	1,500	967	202	12	309	504	40	104
Tucker (Bituminous coal only).....	6	452	350	101	3	174	358	16	89
Tyler.....	39	(NA)	(NA)	[6]121	([6])	(NA)	(NA)	(NA)	(NA)
Upshur.....	45	(NA)	(NA)	[6]624	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	30	4,953	3,353	557	38	1,019	1,850	135	364
Wayne.....	35	(NA)	(NA)	[6]326	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7].....	21	(NA)	(NA)	[6]87	([6])	(NA)	(NA)	(NA)	(NA)
Webster (Bituminous coal only).....	14	3,418	2,714	461	53	742	1,694	212	73
Wetzel.....	36	(NA)	(NA)	[6]356	([6])	(NA)	(NA)	(NA)	(NA)
Wirt.....	16	(NA)	(NA)	[6]37	([6])	(NA)	(NA)	(NA)	(NA)
Wood.....	50	(NA)	(NA)	[6]165	([6])	(NA)	(NA)	(NA)	(NA)
Wyoming.....	39	(NA)	(NA)	[6]5,082	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal.....	35	48,501	35,308	4,642	408	8,000	20,674	2,321	1,857

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available. [1]See table 1, footnote 7. [2]See table 2, footnote 8. [3]See table 2, footnote 5. [4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county. [5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for such companies is included with the county data for the Crude petroleum and Natural gas industries. [6]Figures for "All other employees" are included with those for "Production and development workers." [7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS,

(For operations classified in the mineral industries represents total number of establishments; for operations

	County	All mineral operations			Bituminous coal mining		Crude petroleum and natural gas extraction		
		Total	Classified in mineral industries	Included in manufactures	Bituminous coal	Bituminous coal mining contract services	Crude petroleum and natural gas[1]	Natural gas liquids	Oil and gas field contract services[2]
1	West Virginia, total...	2,339	2,322	17	1,294	44	734	41	139
2	Barbour	41	40	1	37	2	1	...	
3	Berkeley	7	5	2	...	...	...	...	
4	Boone	62	62	...	40	2	20	...	
5	Braxton	19	19	...	8	...	11	...	
6	Brooke	25	25	...	19	1	2	1	
7	Cabell	40	39	1	...	...	36	1	
8	Calhoun	67	67	...	...	...	66	1	
9	Clay	27	27	...	6	...	20	1	
10	Doddridge	33	33	...	...	...	32	1	
11	Fayette	106	106	...	97	3	2	...	
12	Gilmer	45	45	...	12	...	31	2	
13	Grant	15	15	...	12	...	1	...	
14	Greenbrier	73	73	...	70	...	...	...	
15	Hampshire	1	1	...	...	...	...	...	
16	Hancock	18	15	3	5	...	7	...	
17	Harrison	146	145	1	109	5	29	2	
18	Jackson	29	29	...	...	...	26	2	
19	Jefferson	7	5	2	...	...	...	...	
20	Kanawha	129	127	2	69	5	39	9	
21	Lewis	33	31	2	8	5	16	2	
22	Lincoln	56	55	1	3	...	46	1	
23	Logan	70	70	...	57	3	10	...	
24	McDowell	135	135	...	130	5	...	...	
25	Marion	59	59	...	26	1	29	3	
26	Marshall	14	14	...	2	...	12	...	
27	Mason	13	13	...	10	...	2	...	(NA)
28	Mercer	55	54	1	45	6	...	...	
29	Mineral	11	11	...	9	...	...	...	
30	Mingo	47	47	...	35	...	10	...	
31	Monongalia	87	87	...	67	...	16	1	
32	Morgan	1	1	...	...	...	...	...	
33	Nicholas	60	60	...	57	...	2	...	
34	Ohio	5	5	...	3	...	1	...	
35	Pendleton	3	3	...	...	...	...	...	
36	Pleasants	47	47	...	...	...	47	...	
37	Pocahontas	7	7	...	7	...	...	...	
38	Preston	101	100	1	94	1	4	...	
39	Putnam	37	37	...	16	...	21	...	
40	Raleigh	111	111	...	103	...	3	...	
41	Randolph	27	27	...	18	1	6	...	
42	Ritchie	105	105	...	...	...	104	1	
43	Roane	44	44	...	...	...	41	3	
44	Taylor	24	24	...	21	1	2	...	
45	Tucker	8	8	...	6	...	1	...	
46	Tyler	39	39	...	...	...	33	5	
47	Upshur	45	45	...	30	1	14	...	
48	Wayne	35	35	...	13	...	21	...	
49	Webster	15	15	...	14	1	...	...	
50	Wetzel	36	36	...	...	...	29	6	
51	Wirt	16	16	...	...	...	16	...	
52	Wood	50	50	...	...	...	48	...	
53	Wyoming	39	39	...	35	1	2	...	

NA Not available.

[1]See table 3, footnote 4, and for county figures, table 3, footnote 7.

[2]See table 3, footnote 5.

BY INDUSTRY AND COUNTY: 1954

classified in the manufacturing industries represents number of establishments including a mine or quarry)

Nonmetallic minerals (except fuels) mining												
Dimension sandstone	Crushed and broken stone				Sand and gravel		Clay, ceramic, and refractory minerals					
	Limestone		Sandstone	Stone, n.e.c.	Common sand and gravel	Foundry sand	Fire clay		Kaolin and ball clay (included in manufactures)	Clay, ceramic, and refractory minerals, n.e.c.		
	Classified in mineral industries	Included in manufactures					Classified in mineral industries	Included in manufactures		Classified in mineral industries	Included in manufactures	
1	27	4	5	2	31	2	1	4	1	1	8	1
...	...	1	...	...	...	...	...	...	...	...	...	2
...	4	...	...	...	1	...	...	...	...	...	2	3
...	...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	...	2	...	...	...	...	...	...	6
...	...	...	...	...	2	...	...	...	...	...	1	7
...	...	...	...	...	...	...	...	...	...	...	...	8
...	...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	...	...	...	...	...	10
...	1	...	1	...	2	...	...	...	...	...	...	11
...	...	...	...	...	...	...	...	...	...	...	...	12
...	2	...	...	...	...	...	...	...	...	...	...	13
1	2	...	...	...	...	...	...	...	...	...	...	14
...	1	...	...	...	...	...	...	...	...	...	...	15
...	...	...	...	...	2	...	1	2	1	...	...	16
...	...	...	...	...	...	...	...	...	...	...	1	17
...	...	...	...	...	1	...	...	...	...	...	...	18
...	5	2	...	...	...	...	...	...	...	...	...	19
...	...	...	1	1	3	...	...	2	...	...	...	20
...	...	...	...	...	...	...	...	...	...	...	2	21
...	...	...	...	...	4	...	...	...	...	1	1	22
...	...	...	...	...	...	...	...	...	...	...	...	23
...	...	...	...	...	...	...	...	...	...	...	...	24
...	...	...	...	...	...	...	...	...	...	...	...	25
...	...	...	...	...	...	...	...	...	...	...	...	26
...	...	...	...	...	1	...	...	...	...	...	...	27
...	3	...	...	...	...	...	...	...	...	...	1	28
...	2	...	...	...	...	...	...	...	...	...	...	29
...	...	...	...	...	2	...	...	...	...	...	...	30
...	1	...	...	1	...	1	...	...	...	...	...	31
...	...	...	...	...	...	1	...	...	...	...	...	32
...	...	...	...	...	1	...	...	...	...	...	...	33
...	...	...	...	...	1	...	...	...	...	...	...	34
...	3	...	...	...	...	...	...	...	...	...	...	35
...	...	...	...	...	...	...	...	...	...	...	...	36
...	...	...	...	...	...	...	...	...	...	...	...	37
...	1	1	...	...	...	...	...	...	...	...	...	38
...	...	...	...	...	...	...	...	...	...	...	...	39
...	...	...	3	...	2	...	...	...	...	...	...	40
...	2	...	...	...	...	...	...	...	...	...	...	41
...	...	...	...	...	...	...	...	...	...	...	...	42
...	...	...	...	...	...	...	...	...	...	...	...	43
...	...	...	...	...	...	...	...	...	...	...	...	44
...	...	...	...	...	1	...	...	...	...	...	...	45
...	...	...	...	...	1	...	...	...	...	...	...	46
...	...	...	...	...	...	...	...	...	...	...	...	47
...	...	...	...	...	1	...	...	...	...	...	...	48
...	...	...	...	...	...	...	...	...	...	...	...	49
...	...	...	...	...	1	...	...	...	...	...	...	50
...	...	...	...	...	...	...	...	...	...	...	...	51
...	...	...	...	...	2	...	...	...	...	...	...	52
...	...	...	...	...	1	...	...	...	...	...	...	53

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
West Virginia, all mineral operations:												
Including operations classified in manufactures	2,339	159	1,095	408	210	186	89	108	60	23	1	...
Mineral industries only	2,322	158	1,090	406	206	183	87	108	60	23	1	...
Bituminous coal mining, total	1,338	33	464	284	160	145	71	101	57	22	1	...
Bituminous coal	1,294	31	442	276	154	139	71	101	57	22	1	...
Bituminous coal mining contract services	44	2	22	8	6	6	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	914	123	611	103	36	23	11	4	2	1	...	...
Crude petroleum and natural gas	734	119	525	47	21	10	5	4	2	1	...	...
Natural gas liquids	41	2	22	8	3	4	2	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	97	...	41	35	9	8	4	...	...	...	...	...
Building, repairing, and dismantling rigs and derricks	8	...	2	6	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c	34	2	21	7	3	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	87	3	20	21	14	18	7	3	1	...	...	...
Minerals industries only	70	2	15	19	10	15	5	3	1	...	...	...
Dimension sandstone	1	...	1	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	27	...	3	7	5	6	3	3	...	...	...	...
Included in manufactures	4	...	...	...	...	3	1	...	...	...	...	...
Sandstone	5	...	...	1	1	3	...	...	...	...	...	...
Stone, n.e.c	2	...	1	1	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	31	2	10	10	3	5	1	...	...	...	...	...
Glass sand	2	...	...	...	...	...	1	...	1	...	...	...
Clay, ceramic, and refractory minerals:												
Fire clay:												
Classified in mineral industries	1	...	...	...	1	...	...	...	...	...	...	...
Included in manufactures	4	...	...	2	1	...	1	...	...	...	...	...
Kaolin and ball clay (included in manufactures)	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	1	...	...	...	...	1	...	...	...	...	...	...
Included in manufactures	8	1	4	...	3	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[2]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
West Virginia, total	68,340	513,492	18,215	0.27	35	15,034	1,667	47,444	86,529	1	85	7	7
Bituminous coal mining, total	61,873	434,141	6,609	0.11	15	3,781	1,302	46,531	40,511	1	71	19	9
Bituminous coal	61,518	431,087	6,609	0.11	15	3,781	1,302	46,531	40,511	1	71	19	[3]9
Bituminous coal mining contract services	355	3,054	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	4,909	[4]62,760	7,469	1.52	119	7,117	xxx	xxx	[5]36,619	...	99	([6])	1
Crude petroleum and natural gas	3,368	48,525	369	0.11	8	91	xxx	xxx	(NA)	...	85	5	[3]10
Natural gas liquids	406	([4])	7,078	17.43	(NA)	7,026	xxx	xxx	36,228	...	100	([6])	...
Oil and gas field contract services:													
Drilling oil and gas wells	937	6,449	22	0.02	3	...	xxx	xxx	(NA)	...	73	...	[7]27
Building, repairing, and dismantling rigs and derricks	38	96	...	...	...	...	xxx	xxx	...	...	...	...	...
Oil and gas field contract services, n.e.c.	160	920	...	...	...	...	xxx	xxx	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	1,558	16,591	4,137	2.66	249	4,136	365	913	9,399	3	84	...	13
Crushed and broken limestone	807	6,538	604	0.75	92	603	365	913	1,444	...	100	...	...
Sand and gravel	601	7,107	3,533	5.88	497	3,533	...	...	7,955	4	80	...	[7]16
Other industries	150	2,946	...	...	...	...	...	...	...	...	...	...	...

NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For computations of water intake per production worker, including mine water used, see table 2.
[3]Includes "not specified," as follows: Bituminous coal, 1 percent; Crude petroleum and natural gas, 3 percent.
[4]See table 2, footnote 5.
[5]For industries other than Natural gas liquids, includes water intake only.
[6]Less than 0.5 percent.
[7]Represents "not specified."

WISCONSIN

148-1

MINING IN WISCONSIN: 1954

Rank among States:
Employment, 32
Value of shipments, 31

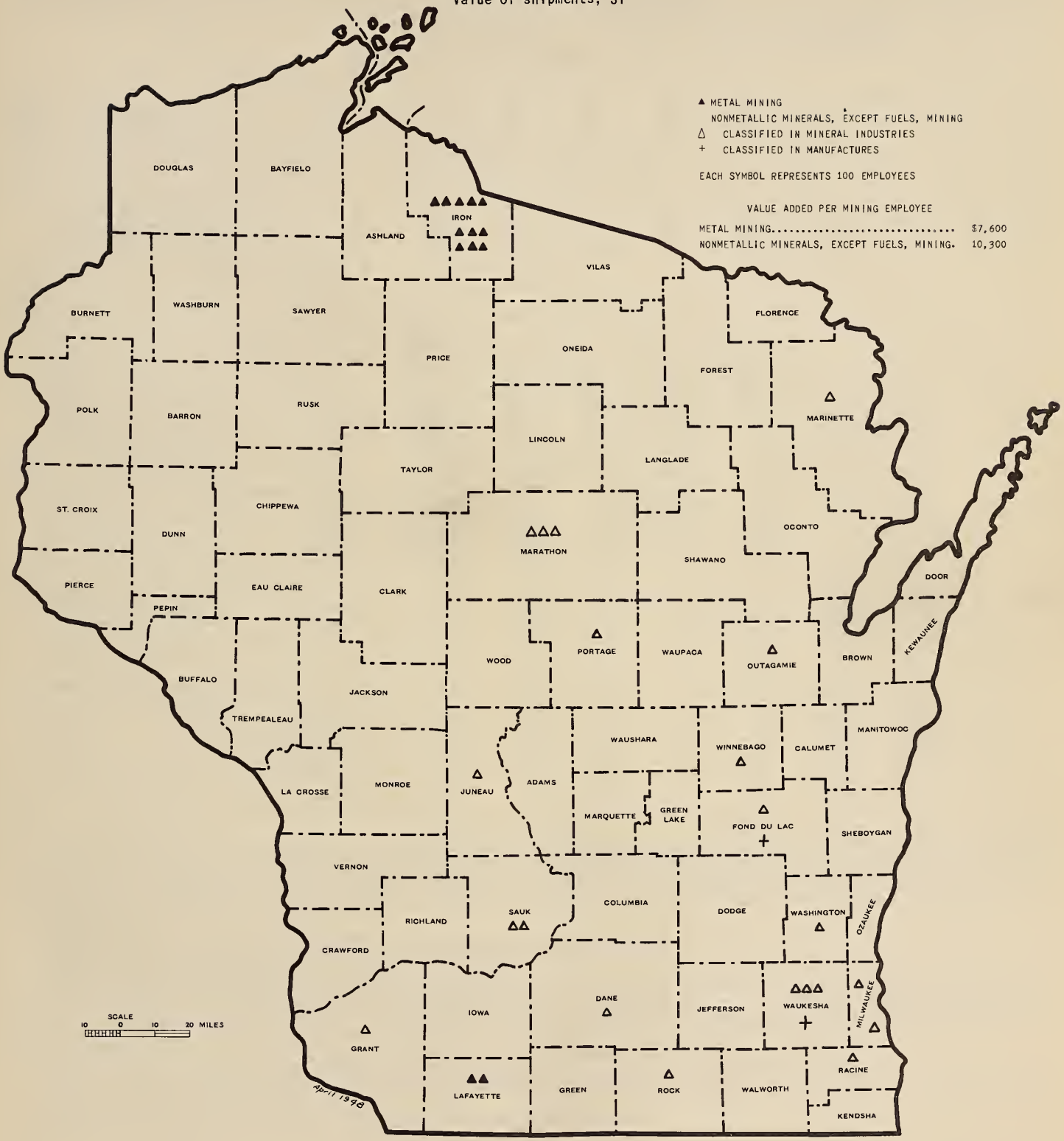




Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations			Comparative statistics excluding sand, gravel, common clay, and shale operations and stone quarries operated as part of cement and lime establishments					
	1954	1939[1]	1929[2]	1954[3]	1939[1]	1929[4]	1919	1909	1902[5]
Number of operating companies	302	131	(NA)	142	[6]74	(NA)	(NA)	[6]290	[6]396
Number of establishments	329	(NA)	147	150	(NA)	91	96	291	(NA)
Number of mines and quarries	321	153	161	145	83	94	111	308	415
Number of preparation plants	261	126	(NA)	106	66	(NA)	(NA)	(NA)	(NA)
Value of shipments[7]....$1,000..	51,663	8,412	13,163	39,237	6,263	10,003	10,581	7,459	4,428
Value added in mining....do....	38,682	6,460	10,463	29,333	4,805	7,959	7,419	5,907	3,615
Number of persons engaged, total	4,597	2,396	3,333	3,332	1,801	2,657	4,008	5,316	[8]3,870
Production and development workers	3,774	2,093	2,907	2,863	1,619	2,383	3,652	4,795	3,590
All other employees	509	229	[9]384	311	142	[9]241	302	289	280
Proprietors and firm members	314	74	42	158	40	33	54	232	(NA)
Performing manual labor	183	34	(NA)	93	20	(NA)	19	107	(NA)
Man-hours worked by production and development workers....1,000..	7,921	4,177	(NA)	5,848	3,229	(NA)	(NA)	(NA)	(NA)
Principal expenses designated below, total....$1,000..	33,460	5,069	7,828	25,502	3,842	5,989	8,695	4,951	3,042
Wages of production and development workers....do....	15,258	2,604	4,231	11,672	2,041	3,403	4,893	3,128	1,992
Salaries of all other employees....do....	2,836	513	[9]897	1,681	343	[9]542	640	271	237
Minerals received for preparation....do....	734	(NA)	(NA)	734	(NA)	(NA)	84	156	(NA)
Supplies....do....	[10]9,727	1,078	1,656	8,498	898	1,344	1,914	893	
Purchased fuel....do....	[10]1,940	365	268	1,050	153	178	364	458	809
Purchased electric energy....do....	[10]1,445	491	718	1,248	399	493	548		
Contract work....do....	[10]1,520	18	58	619	8	29	252	45	4
Purchased machinery installed....do....	[11]5,247		685	4,007		487	(NA)		
Capital expenditures, total....do....	[11]7,632	(NA)	(NA)	6,252	(NA)	(NA)	(NA)		
Development and exploration of mineral property....do....	[11]1,081		490	1,015		490	1,010	(NA)	(NA)
Preparation plant construction....do....	[11]2,027	27		1,973	24				
Other construction....do....	[11]182			109					
New machinery and equipment....do....	[11]3,606	334	(NA)	2,828	283	(NA)	(NA)		
Used plant and equipment....do....	[11]736	79		327	41				
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000..	[11]329	73	67	201	45	46	28	27	13
Per production worker	87	35	23	70	28	19	8	6	4
Prime movers....1,000..	[11]245	30	18	132	13	12	9	26	13
Electric motors driven by purchased energy....do....	[11]84	43	49	69	32	34	19	1	([12])
Horsepower rating of electric motors driven by energy generated at establishment....do....	[11]25	1	1	...	([12])	([12])	1	1	([12])
Energy used....million kwh equivalent..	[11]723	238	688	446	118	608	(NA)		
Coal....1,000 short tons..	[11]8	18	34	6	7	26	60		
Fuel oils....1,000 barrels..	[11]200	9	4	123	8	3	2		
Gas....million cu.ft..	[11]8	...	2	8	...	2	...	(NA)	(NA)
Electric energy purchased....million kwh..	[11]84	29	40	74	26	31	(NA)		
Electric energy generated and used....do....	[11]12	1	([12])	...	([12])	...	(NA)		

NA Not available.

[1]Except, in part, for value of shipments and value added, excludes data for dimension stone dressing plants operated in conjunction with quarries. The value added in dressing limestone and granite at such operations was $236,000; this value has been included in the value of shipments and value added in mining. The comparable value for sandstone, is not available. Includes data for one central office associated with nonproducing operations.

[2]Excludes data for common clay and shale operations. There were 4 such mines in 1939 with products valued at $34,000. See also footnote 4.

[3]Except for number of operating companies and number of establishments excludes data for one nonmetallic minerals (except fuels) contract services establishment.

[4]Excludes data for 1 nonproducing establishment.

[5]Includes data for 2 cement plants and for lime plants producing lime valued at $549,000.

[6]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[7]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication.

[8]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[9]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[10]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figure for supplies.

[11]Excludes statistics for crushed stone and clay operations classified in manufactures.

[12]Less than one-half of the unit of measure specified.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP

(For explanation of line captions and for statement on the minimum

	Item	Wisconsin, total		Metal mining	Nonmetallic minerals (except fuels) mining	
					Total	
		Including operations classified in manufactures	Mineral industries only		Including operations classified in manufactures	Mineral industries only
1	Number of operating companies	302	270	14	289	257
2	Number of establishments	329	294	16	313	278
	Number of mines and quarries:					
3	1954	321	286	14	307	272
4	1939	153	(NA)	7	146	(NA)
5	Number of preparation plants	261	235	8	253	227
	Value of shipments:					
6	1954.....$1,000..	51,663	49,601	13,436	38,227	36,165
7	1939.....do....	[1]8,412	(NA)	3,461	[1]4,951	(NA)
8	Value added in mining.....do....	38,682	37,144	10,709	27,973	26,435
9	Number of persons engaged, total	4,597	4,273	1,439	3,158	2,834
10	Production and development workers	3,774	3,496	1,293	2,481	2,203
11	All other employees	509	489	125	384	364
12	Proprietors and firm members	314	288	21	293	267
13	Performing manual labor	183	167	6	177	161
	Man-hours worked by production and development workers:					
14	1954.....1,000..	7,921	7,365	2,474	5,447	4,891
15	1939.....do....	[1]4,177	(NA)	1,601	[1]2,576	(NA)
	At mines:					
16	Underground.....do....	1,804	1,800	1,790	14	10
17	Open-pit.....do....	2,747	2,397	...	2,747	2,397
18	Surface (mine shops, yards, etc.)....do....	705	681	515	190	166
19	At preparation plants.....do....	2,665	2,487	169	2,496	2,318
20	Man-hours spent on development and exploration work (included above).....do....	232	230	212	20	18
21	Principal expenses designated below, total.....$1,000..	33,460	31,882	10,341	23,119	21,541
22	Wages of production and development workers.....do....	15,258	14,296	5,611	9,647	8,685
23	Salaries of all other employees.....do....	2,836	2,738	767	2,069	1,971
24	Minerals received for preparation.....do....	769	744	734	35	10
25	Supplies.....do....	[3]9,692	9,275	2,084	[3]7,608	7,191
	Purchased fuel:					
26	Coal.....do....	[3]58	53	32	[3]26	21
27	Fuel oil.....do....	[3]946	914	20	[3]926	894
28	Gas.....do....	[3]6	6	...	[3]6	6
29	Other fuels.....do....	[3]930	910	6	[3]924	904
30	Purchased electric energy.....do....	[3]1,445	1,431	885	[3]560	546
31	Contract work.....do....	[3]1,520	1,515	202	[3]1,318	1,313
32	Purchased machinery installed.....do....	[4]5,247	5,186	514	[4]4,733	4,672
33	Capital expenditures, total.....do....	[4]7,632	7,577	1,750	[4]5,882	5,827
34	Development and exploration of mineral property.....do....	[4]1,081	1,076	1,005	[4]76	71
35	Preparation plant construction.....do....	[4]2,027	2,027	182	[4]1,845	1,845
36	Other construction.....do....	[4]182	182	30	[4]152	152
37	New machinery and equipment.....do....	[4]3,606	3,559	428	[4]3,178	3,131
38	Used plant and equipment.....do....	[4]736	733	105	[4]631	628
39	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total.....1,000..	[4]329	318	54	[4]275	264
40	Per production worker	87	91	42	111	120
41	Prime movers.....1,000..	[4]245	236	7	[4]238	229
42	Electric motors driven by purchased energy.....do....	[4]84	82	47	[4]37	35
43	Horsepower rating of electric motors driven by energy generated at establishment.....do....	[4]25	25	...	[4]25	25
44	Energy used.....million kwh equivalent..	[4]723	695	82	[4]641	613
45	Coal.....1,000 short tons..	[4]8	8	3	[4]5	3
46	Fuel oil.....1,000 barrels..	[4]200	195	3	[4]197	192
47	Gas.....million cu.ft...	[4]8	8	...	[4]8	8
48	Electric energy purchased.....million kwh..	[4]84	84	52	[4]32	32
49	Electric energy generated and used.....do....	[4]12	12	...	[4]12	12
50	Water intake, including mine water used.....million gallons..	[4]5,113	5,113	1,150	[4]3,963	3,963
51	Per production worker.....do....	1.35	1.46	0.89	1.60	1.80

NA Not available. [1]See table 1, footnote 7. [2]Data for 2 dimension sandstone quarries, 1 crushed and broken granite quarry, and 1 crushed and broken trap rock quarry, are included with the data for foundry sand.

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939
size of establishments included for each year, see INTRODUCTION)

Nonmetallic minerals (except fuels) mining--Continued										
Dimension stone				Crushed and broken stone			Sand and gravel		Clay, ceramic, and refractory minerals, n.e.c., and Nonmetallic minerals (except fuels) contract services (including operations classified in manufactures)	
Limestone		Granite, Sandstone, and Stone, n.e.c.		Limestone		Granite, Trap rock, Sandstone, and Stone, n.e.c.	Common sand and gravel	Glass sand and Foundry sand		
Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures	Mineral industries only	Including operations classified in manufactures and wholesale trade	Mineral industries only					
24	10	16	8	82	77	10	144	9	8	1
24	10	20	12	86	79	10	155	9	9	2
24	10	20	12	84	77	10	151	9	9	3
14	(NA)	13	(NA)	49	41	6	58	2	4	4
14	...	8	...	78	74	8	137	8	...	5
2,462	1,046	843	468	8,884	8,767	13,729	11,077	1,065	157	6
495	(NA)	[1] [2]520	(NA)	1,160	1,037	[2]460	1,992	[2]290	34	7
1,726	690	709	411	6,025	5,949	10,240	8,391	745	137	8
323	128	184	91	979	952	434	1,145	78	15	9
276	110	157	81	804	777	360	808	65	11	10
18	6	10	2	87	87	71	190	8	...	11
29	12	17	8	88	88	3	147	5	4	12
21	8	8	5	56	56	2	85	4	1	13
559	216	[1] [2]296	154	1,861	1,808	[2]711	1,873	[2]127	20	14
[1]405	(NA)	[2]202	(NA)	743	(NA)	[2]250	811	[2]132	33	15
4	...	...	...	...	...	...	9	...	1	16
434	205	204	154	863	810	369	800	59	18	17
15	11	20	...	154	154	...	...	...	1	18
106	...	72	...	844	844	342	1,064	68	...	19
...	...	2	...	7	7	2	9	...	...	20
1,913	810	611	309	6,251	6,122	6,515	7,135	642	52	21
1,083	431	435	231	3,158	3,080	1,463	3,218	258	32	22
99	26	43	18	367	367	405	1,129	26	...	23
25	...	...	...	10	10	...	(NA)	(NA)	...	24
629	333	90	38		1,545	4,115	1,025	133		25
...	...	8	3		2	1	15	...		26
29	...	4	1	2,716	195	304	283	111	20	27
...	...	...	...		6	...	...	...		28
25	8	10	6		380	28	454	27		29
18	11	17	10		139	189	149	48		30
5	1	4	2		398	10	862	39		31
97	52	23	7		1,152	2,221	1,148	92		32
92	49	22	10		1,009	3,379	1,250	130		33
1	...	4	...		5	...	40	26		34
...	...	3	3		198	1,590	47	7		35
...	...	...	...		7	72	73	...		36
89	49	14	7		580	1,717	682	96		37
2	...	1	...		219	...	408	1		38
11	2	5	3		118	13	121	7		39
41	20	32	37		152	36	150	102		40
10	2	2	1	(NA)	109	4	108	5	(NA)	41
1	...	3	2		9	9	13	2		42
...	...	...	...		(5)	...	25	...		43
15	2	18	3		177	154	230	47		44
...	...	2	(5)		1	(5)	2	...		45
5	...	(5)	(5)		38	77	55	22		46
...	...	...	...		8	...	...	...		47
(5)	(5)	(5)	(5)		7	15	7	3		48
...	...	...	...		...	...	12	...		49
...	...	1	1		114	130	3,601	117		50
...	...	0.01	0.01		0.15	0.36	4.46	1.80		51

[3]See table 1, footnote 10. [4]See table 1, footnote 11. [5]See table 1, footnote 12.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Wisconsin, all mineral operations:									
Including operations in manufactures	329	51,663	38,682	3,774	509	7,921	15,258	2,836	[1]6,896
Mineral industries only	294	49,601	37,144	3,496	489	7,365	14,296	2,738	6,844
Metal mining	16	13,436	10,709	1,293	125	2,474	5,611	767	1,645
Nonmetallic minerals (except fuels) mining:									
Including operations in manufactures	313	38,227	27,973	2,481	384	5,447	9,647	2,069	[1]5,251
Mineral industries only	278	36,165	26,435	2,203	364	4,891	8,685	1,971	5,199
Dimension stone:									
Including operations in manufactures	44	3,305	2,435	433	28	855	1,518	142	111
Mineral industries only	22	1,514	1,101	191	8	370	662	44	59
Crushed and broken stone:									
Including operations in manufactures	96	22,623	16,265	1,164	158	2,572	4,621	772	[1]4,169
Mineral industries only	89	22,496	16,189	1,137	158	2,519	4,543	772	4,169
Sand and gravel	164	12,142	9,136	873	198	2,000	3,476	1,155	971
Clay, ceramic, and refractory minerals (including operations in manufactures) and Nonmetallic minerals (except fuels) contract services	9	157	137	11	...	20	32	...	(NA)
COUNTY									
Brown (mineral industries only)	14	944	773	62	9	141	265	55	138
Crawford	5	383	227	29	4	78	95	23	...
Dane, total	18	972	581	91	9	213	373	55	101
Crushed and broken stone	7	321	214	27	1	63	114	10	42
Sand and gravel	11	651	367	64	8	150	259	45	59
Dodge (mineral industries only)	5	319	401	31	3	72	112	44	41
Fond du Lac (mineral industries only)	9	534	382	82	5	183	267	59	29
Crushed and broken stone	4	358	255	52	...	105	145	...	11
Grant	10	443	392	62	6	138	200	33	148
Green Lake	11	395	295	30	2	71	105	3	100
Iowa	6	528	303	60	9	140	207	35	254
Kenosha	4	176	106	20	1	44	75	1	29
La Crosse (mineral industries only)	4	150	129	14	...	22	28	...	1
Lafayette	10	2,917	1,512	228	16	460	752	92	114
Manitowoc (including operations in manufactures)	7	362	314	27	2	54	85	4	(NA)
Milwaukee (mineral industries only)	17	2,283	1,576	127	34	327	663	197	67
Sand and gravel	12	1,533	990	83	19	195	416	127	32
Monroe	4	137	105	14	...	35	40	...	5
Outagamie	4	460	384	36	5	92	240	28	18
Ozaukee	4	262	227	16	9	26	60	40	12
Pierce	6	202	155	25	3	60	75	3	16
Racine	4	727	530	46	4	98	220	20	20
Rock	16	1,682	1,400	113	18	265	445	132	118
Crushed and broken stone	8	405	268	21	3	34	70	5	63
Sand and gravel	8	1,277	1,132	92	15	231	375	127	55
St. Croix	4	196	157	35	3	81	113	9	6
Sauk	12	2,065	1,578	195	19	445	788	63	413
Vernon	3	114	89	11	...	24	33	...	...
Walworth (mineral industries only)	9	395	314	32	8	77	122	38	43
Washington (mineral industries only)	9	550	331	52	11	93	204	64	22
Waukesha:									
Including operations in manufactures	30	4,246	3,025	300	52	659	1,370	339	228
Mineral industries on	19	3,569	2,623	242	45	532	1,103	310	207
Sand and gravel	12	1,683	1,219	88	32	201	415	263	99
Waupaca	6	140	115	19	8	36	52	26	...
Winnebago, total	7	1,232	913	94	14	208	390	50	140
Crushed and broken stone	3	649	433	39	10	94	175	41	81
Sand and gravel	4	583	480	55	4	114	215	9	59

NA Not available. [1]See table 1, footnote 11.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	All operations			Metal mining		Nonmetallic minerals (except fuels) mining							
						Dimension stone							
						Limestone		Granite		Sandstone		Stone, n.e.c.	
	Total	Classified in mineral industries	Included in manufactures	Iron ores	Lead and zinc ores	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures	Classified in mineral industries	Included in manufactures
Wisconsin, total	329	294	35	3	13	10	14	6	4	5	2	1	2
Adams	1	1	...	...	...	...	...	...	...	...	...	...	...
Ashland	1	1	...	1	...	...	...	...	...	...	...	...	...
Barron	3	3	...	...	...	...	...	...	...	...	...	...	...
Brown	15	14	1	...	...	2	...	...	...	...	...	...	...
Buffalo	2	2	...	...	...	...	...	...	...	...	...	...	...
Calumet	3	2	1	...	...	...	...	...	...	...	...	...	...
Chippewa	2	2	...	...	...	...	...	...	...	...	...	...	...
Clark	5	5	...	...	...	...	...	...	...	1	...	...	...
Columbia	2	2	...	...	...	1	...	...	...	...	...	...	...
Crawford	5	5	...	...	...	...	...	...	...	...	...	...	...
Dane	18	18	...	...	...	...	...	...	...	...	...	...	...
Dodge	6	5	1	...	...	...	...	...	...	...	...	...	...
Door	3	2	1	...	...	...	1	...	...	...	...	...	...
Douglas	1	1	...	...	...	...	...	...	...	...	...	...	...
Dunn	4	2	2	...	...	1	...	...	...	...	1	...	...
Eau Claire	1	1	...	...	...	...	...	...	...	...	...	...	...
Fond du Lac	14	9	5	...	...	1	2	...	...	...	...	1	...
Grant	10	10	...	...	2	...	...	...	...	...	...	...	...
Green	2	2	...	...	...	...	...	...	...	...	...	...	...
Green Lake	11	11	...	...	...	...	...	...	...	...	...	...	...
Iowa	6	6	...	...	2	...	...	...	...	...	...	...	...
Iron	2	2	...	2	...	...	...	...	...	...	...	...	...
Jefferson	2	2	...	...	...	...	...	...	...	...	...	...	...
Juneau	1	1	...	...	...	...	...	...	...	...	...	...	...
Kenosha	4	4	...	...	...	...	...	...	...	...	...	...	...
Kewaunee	2	2	...	...	...	...	...	...	...	...	...	...	...
La Crosse	5	4	1	...	...	...	...	...	...	...	...	...	...
Lafayette	10	10	...	...	9	...	...	...	...	...	...	...	...
Lincoln	1	1	...	...	...	...	...	...	...	...	...	...	...
Manitowoc	7	3	4	...	...	...	...	...	...	...	...	...	...
Marathon	13	11	2	...	...	...	...	5	1	1	...	...	...
Marinette	4	3	1	...	...	...	...	1	1	...	...	...	...
Marquette	1	...	1	...	...	...	...	...	1	...	...	...	...
Milwaukee	18	17	1	...	...	...	1	...	...	...	...	...	...
Monroe	4	4	...	...	...	...	...	...	...	...	...	...	...
Oconto	3	3	...	...	...	...	...	...	...	...	...	...	...
Oneida	1	1	...	...	...	...	...	...	...	...	...	...	...
Outagamie	4	4	...	...	...	...	...	...	...	...	...	...	...
Ozaukee	4	4	...	...	...	...	...	...	...	...	...	...	...
Pepin	1	1	...	...	...	...	...	...	...	...	...	...	...
Pierce	6	6	...	...	...	...	...	...	...	...	...	...	...
Polk	1	1	...	...	...	...	...	...	...	...	...	...	...
Portage	4	4	...	...	...	...	...	...	...	1	...	...	...
Racine	4	4	...	...	...	...	...	...	...	...	...	...	...
Richland	2	2	...	...	...	...	...	...	...	...	...	...	...
Rock	16	16	...	...	...	...	...	...	...	...	...	...	...
St. Croix	4	4	...	...	...	...	...	...	...	...	...	...	...
Sauk	12	12	...	...	...	1	...	...	...	...	...	...	...
Shawano	3	3	...	...	...	...	...	...	...	...	...	...	...
Sheboygan	3	3	...	...	...	...	...	...	...	...	...	...	...
Taylor	1	1	...	...	...	...	...	...	...	...	...	...	...
Trempealeau	1	1	...	...	...	...	...	...	...	...	...	...	...
Vernon	3	3	...	...	...	...	...	...	...	...	...	...	...
Walworth	10	9	1	...	...	...	1	...	...	...	...	...	...
Washington	10	9	1	...	...	1	1	...	...	...	...	...	...
Waukesha	30	19	11	...	...	3	8	...	1	...	...	...	2
Waupaca	6	6	...	...	...	...	...	...	...	...	...	...	...
Waushara	1	1	...	...	...	...	...	...	...	...	...	...	...
Winnebago	7	7	...	...	...	...	...	...	...	...	...	...	...
Wood	3	2	1	...	...	...	...	...	...	2	1	...	...

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

County	Nonmetallic minerals (except fuels) mining--Continued											
	Crushed and broken stone						Sand and gravel			Clay, ceramic, and refractory minerals, n.e.c.		Nonmetallic minerals (except fuels) contract services
	Limestone		Granite	Trap rock	Sandstone	Stone, n.e.c.	Common sand and gravel	Glass sand	Foundry sand			
	Classified in mineral industries	Included in manufactures								Classified in mineral industries	Included in manufactures	
Wisconsin, total	79	7	1	2	6	1	155	2	7	2	6	1
Adams	...	...	...	...	...	...	1	...	...	...	...	...
Ashland	...	...	...	...	...	...	...	...	...	...	...	...
Barron	1	...	...	...	...	...	2	...	...	...	...	...
Brown	1	...	...	...	...	1	10	...	...	...	1	...
Buffalo	1	...	...	...	...	...	1	...	...	...	...	...
Calumet	...	1	...	...	...	...	2	...	...	...	...	...
Chippewa	...	...	...	...	...	...	2	...	...	...	...	...
Clark	...	...	...	...	...	...	4	...	...	...	...	...
Columbia	...	...	...	...	...	...	...	1	...	...	...	...
Crawford	3	...	...	...	...	...	2	...	...	...	...	...
Dane	7	...	...	...	...	...	11	...	...	...	...	...
Dodge	1	1	...	...	1	...	3	...	...	...	...	...
Door	...	...	...	...	...	...	2	...	...	...	...	...
Douglas	...	...	...	...	...	...	1	...	...	...	...	...
Dunn	...	...	...	...	...	...	1	...	...	...	1	...
Eau Claire	...	...	...	...	...	...	1	...	...	...	...	...
Fond du Lac	4	1	...	...	...	...	3	...	...	...	2	...
Grant	7	...	...	...	...	...	1	...	...	...	...	...
Green	1	...	...	...	...	...	...	1	...	...	...	...
Green Lake	...	...	...	...	...	...	4	...	7	...	...	...
Iowa	4	...	...	...	...	...	...	...	...	...	...	...
Iron	...	...	...	...	...	...	...	...	...	...	...	...
Jefferson	1	...	...	...	...	...	1	...	...	...	...	...
Juneau	1	...	...	...	...	...	...	...	...	...	...	...
Kenosha	...	...	...	...	...	...	4	...	...	...	...	...
Kewaunee	...	...	...	...	...	...	2	...	...	...	...	...
La Crosse	1	...	...	...	...	...	3	...	...	...	1	...
Lafayette	1	...	...	...	...	...	...	...	...	...	...	...
Lincoln	...	...	...	...	...	...	1	...	...	...	...	...
Manitowoc	...	4	...	...	...	...	3	...	...	...	...	...
Marathon	...	...	1	1	...	...	3	...	...	...	1	...
Marinette	...	...	...	1	...	...	1	...	...	...	...	...
Marquette	...	...	...	...	...	...	...	...	...	...	...	...
Milwaukee	4	...	...	...	...	...	12	...	...	...	...	1
Monroe	3	...	...	...	...	...	1	...	...	...	...	...
Oconto	...	...	...	...	...	...	3	...	...	...	...	...
Oneida	...	...	...	...	...	...	1	...	...	...	...	...
Outagamie	2	...	...	...	...	...	2	...	...	...	...	...
Ozaukee	1	...	...	...	...	...	3	...	...	...	...	...
Pepin	1	...	...	...	...	...	...	...	...	...	...	...
Pierce	1	...	...	...	...	...	5	...	...	...	...	...
Polk	...	...	...	...	1	...	...	...	...	...	...	...
Portage	1	...	...	...	...	...	2	...	...	...	...	...
Racine	1	...	...	...	...	...	2	...	...	1	...	...
Richland	1	...	...	...	...	...	1	...	...	...	...	...
Rock	8	...	...	...	...	...	8	...	...	...	...	...
St. Croix	2	...	...	...	...	...	2	...	...	...	...	...
Sauk	5	...	...	...	4	...	2	...	...	...	...	...
Shawano	...	...	...	...	...	...	3	...	...	...	...	...
Sheboygan	...	...	...	...	...	...	3	...	...	...	...	...
Taylor	...	...	...	...	...	...	1	...	...	...	...	...
Trempealeau	1	...	...	...	...	...	...	...	...	...	...	...
Vernon	3	...	...	...	...	...	...	...	...	...	...	...
Walworth	...	...	...	...	...	...	9	...	...	...	...	...
Washington	...	...	...	...	...	...	8	...	...	...	...	...
Waukesha	4	...	...	...	...	...	12	...	...	...	...	...
Waupaca	3	...	...	...	...	...	2	...	...	1	...	...
Waushara	1	...	...	...	...	...	...	...	...	...	...	...
Winnebago	3	...	...	...	...	...	4	...	...	...	...	...
Wood	...	...	...	...	...	...	...	...	...	...	...	...

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Wisconsin, all mineral operations:												
Including operations classified in manufactures and wholesale trade	329	34	145	55	52	34	4	2	2	1	...	...
Mineral industries only	294	28	129	50	49	30	3	2	2	1	...	...
Metal mining, total	16	3	3	2	2	2	1	1	1	1	...	...
Iron ores	3	...	1	...	...	...	...	...	1	1	...	...
Lead and zinc ores	13	3	2	2	2	2	1	1	...	...	...	...
Nonmetallic minerals (except fuels) mining:												
Including operations classified in manufactures and wholesale trade	313	31	142	53	50	32	3	1	1	...	...	...
Mineral industries only	278	25	126	48	47	28	2	1	1	...	...	...
Dimension stone:												
Limestone:												
Classified in mineral industries	10	2	5	1	...	1	1	...	...	...	...	...
Included in manufactures	14	3	4	2	2	2	1	...	...	...	...	...
Granite:												
Classified in mineral industries	6	...	3	...	1	2	...	...	...	...	...	...
Included in manufactures	4	...	1	...	1	2	...	...	...	...	...	...
Sandstone:												
Classified in mineral industries	5	1	4	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	2	...	...	...	...	...	...	...	...	...
Stone, n.e.c.:												
Classified in mineral industries	1	...	1	...	...	...	...	...	...	...	...	...
Included in manufactures	2	...	2	...	...	...	...	...	...	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	79	8	26	15	19	9	1	1	...	...	...	...
Included in manufactures and wholesale trade	7	1	4	2	...	...	...	...	...	...	...	...
Granite	1	...	1	...	...	...	...	...	...	...	...	...
Trap rock	2	...	...	...	...	2	...	...	...	...	...	...
Sandstone	6	...	2	...	1	2	...	...	1	...	...	...
Stone, n.e.c	1	...	1	...	...	...	...	...	...	...	...	...
Sand and gravel:												
Common sand and gravel	155	13	74	32	25	11	...	...	...	...	...	...
Glass sand	2	...	2	...	...	...	...	...	...	...	...	...
Foundry sand	7	...	5	...	1	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c.:												
Classified in mineral industries	2	1	1	...	...	...	...	...	...	...	...	...
Included in manufactures	6	2	3	1	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	1	...	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Wisconsin, total	3,496	37,144	3,826	1.09	103	2,889	1,287	4,031	7,058	3	32	55	10
Metal mining	1,293	10,709	117	0.09	11	114	1,033	3,909	1,436	3	1	95	1
Nonmetallic minerals (except fuels) mining, total	2,203	26,435	3,709	1.68	140	2,775	254	122	5,622	4	33	53	10
Dimension stone:													
Limestone	110	690	...	...	...	...	...	10	...	...	...	...	...
Granite, Sandstone, and Stone, n.e.c	81	411	...	...	...	...	1	3	11	...	...	...	...
Crushed and broken stone:													
Limestone	777	5,949	113	0.15	19	112	1	109	188	1	7	92	...
Granite, Traprock, Sandstone, and Stone, n.e.c.	360	10,240	130	0.36	13	101	...	...	141	69	16	15	...
Sand and gravel:													
Common sand and gravel	808	8,391	3,349	4.14	399	2,445	252	...	5,165	1	36	52	[2]11
Glass sand and Foundry sand	65	745	117	1.80	157	117	...	...	117	...	...	100	...
Clay, ceramic, and refractory minerals and Nonmetallic minerals (except fuels) contract services	2	9	...	...	...	...	...	...	...	...	...	...	...

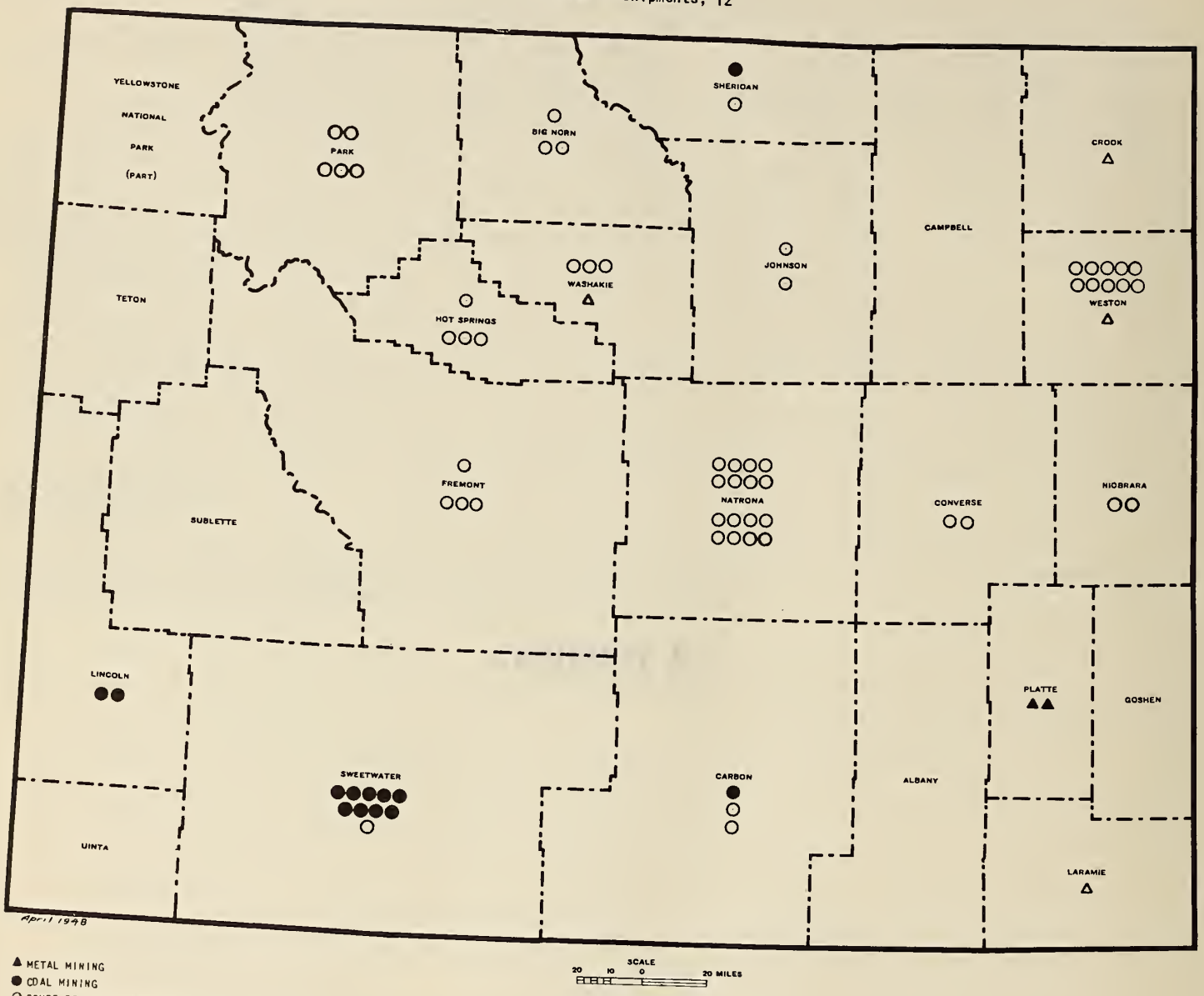
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]Includes 10 percent representing "not specified."

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WYOMING

MINING IN WYOMING: 1954

Rank among States:
Employment, 21
Value of shipments, 12



▲ METAL MINING
● COAL MINING
○ CRUDE PETROLEUM AND NATURAL GAS EXTRACTION
△ NONMETALLIC MINERALS (EXCEPT FUELS) MINING

EACH SYMBOL REPRESENTS 100 EMPLOYEES

VALUE ADDED PER MINING EMPLOYEE

METAL MINING	$11,000
COAL MINING	7,500
CRUDE PETROLEUM AND NATURAL GAS EXTRACTION	31,600
NONMETALLIC MINERALS (EXCEPT FUELS) MINING	19,100

Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1939, 1929, 1919, 1909, AND 1902

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Comparative statistics for all operations					Comparative statistics excluding the Crude petroleum and natural gas extraction industries		
	1954	1939	1919[1]	1909[1]	1902[2]	1954	1939	1929[3]
Number of operating companies	446	162	(NA)	[4]126	[4]137	96	[4]79	(NA)
Number of establishments	487	(NA)	121	130	(NA)	117	(NA)	66
Number of mines and quarries	99	89	91	21	159	99	89	84
Number of oil and gas wells producing at end of year	5,882	2,673	1,084	384	11	xxx	xxx	xxx
Number of preparation plants	58	17	(NA)	(NA)	(NA)	48	10	(NA)
Value of shipments[5]....$1,000	313,659	38,871	41,929	10,572	5,684	41,817	13,109	18,817
Value added in mining....do	[5]258,503	32,679	33,128	8,630	4,623	32,171	10,914	15,853
Number of persons engaged, total	10,068	6,930	10,399	8,463	5,027	2,650	4,839	5,631
Production and development workers	7,491	6,204	9,781	7,900	[6]4,795	2,279	4,511	5,354
All other employees	2,254	644	599	334	232	298	265	[7]253
Proprietors and firm members	323	82	19	229	(NA)	73	63	24
Performing manual labor	160	52	7	26	(NA)	44	47	(NA)
Man-hours worked by production and development workers....1,000	14,641	10,189	(NA)	(NA)	(NA)	3,821	6,490	(NA)
Principal expenses designated below, total....$1,000	147,143	16,634	24,972	8,896	5,087	20,012	8,837	13,381
Wages of production and development workers....do	32,508	8,765	14,710	6,427	3,750	8,699	5,896	9,769
Salaries of all other employees....do	13,339	1,677	1,461	527	276	1,520	746	[7]648
Minerals received for preparation....do	1,399	(NA)	[8]74	...	(NA)	349	(NA)	(NA)
Supplies....do	38,258	2,206	6,790	1,465		5,610	1,653	2,157
Purchased fuel[9]....do	3,959	388	805	396	959	840	219	420
Purchased electric energy....do	1,534	422	311			565	283	354
Contract work....do	56,146	3,176	821	81	102	2,429	40	33
Purchased machinery installed....do	25,319		(NA)			960		603
Capital expenditures, total....do	71,475	(NA)	(NA)			1,107	(NA)	(NA)
Development and exploration of mineral property....do	40,704		6,843	(NA)	(NA)	106		397
Preparation plant construction....do	1,713	99				142	15	
Other construction....do	3,599		(NA)			66		(NA)
New machinery and equipment....do	23,803	1,957				613	439	
Used plant and equipment....do	1,656	148				180	56	
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	682	129	63	31	21	208	62	52
Per production worker	91	21	6	4	4	91	14	10
Prime movers....1,000	553	85	49	30	21	119	31	29
Electric motors driven by purchased energy....do	129	44	14	1	...	89	31	23
Horsepower rating of electric motors driven by energy generated at establishment....do	32	35	4	3	1	14	33	41
Energy used....million kwh equivalent	9,546	1,856	(NA)			1,413	855	1,409
Coal[10]....1,000 short tons	79	103	243			79	103	181
Fuel oils[10]....1,000 barrels	285	71	132	(NA)	(NA)	116	26	2
Gas[10]....million cu.ft	25,256	2,959	1,824			1,641	...	...
Electric energy purchased....million kwh	132	25	(NA)			50	14	13
Electric energy generated and used....do	101	38	(NA)			33	32	50

xxx Not applicable.
D Withheld to avoid approximately disclosing figures for individual companies.
NA Not available.

[1]Excludes data for sand, gravel, common clay, and shale operations, and limestone quarries operated as part of cement plants. There were 3 such sand, gravel, common clay, and shale mines in 1939 with products valued at $56,000.

[2]Includes data for lime plants producing lime valued at $2,000.

[3]Excludes data for common clay and shale mines. Only one such mine was reported for 1939.

[4]Represents the sum of the number of operating companies in individual industries or available groups of industries. Probably includes some duplication due to the same company operating in more than one industry.

[5]For crushed stone and clay operations classified in the manufacturing industries includes the estimated value of minerals produced and used in the same establishment. For 1954, 1919, and 1909, represents gross value of shipments (or production for 1919 and 1909) and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation." For all other years the figures represent net production and exclude this duplication. For 1954, excludes data for the uranium-radium-vanadium ores industry.

[6]Figures for average employment were reduced to a 300-day basis for establishments which operated for a shorter period.

[7]Excludes data for employees at central offices not included in reports for mining and mineral preparation establishments.

[8]Includes natural gas purchased for resale.

[9]For 1954, represents purchased fuel only. For 1939, includes the value of fuels produced and used at the same establishment for power or heat.

[10]Includes data for fuels produced and used at the same establishment for power or heat.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP
(For explanation of line captions and for statement on the minimum

	Item	Wyoming, total		Metal mining and Bituminous coal mining				Crude petroleum and natural gas extraction		
		Including operations classified in manufactures	Mineral industries only	Total	Uranium-radium-vanadium ores	Bituminous coal	Other metal mining and Bituminous coal contract services industries	Total	Crude petroleum and natural gas	Natural gas liquids
1	Number of operating companies	446	445	42	11	22	10	352	210	9
2	Number of establishments	487	483	55	13	32	10	370	214	10
	Number of mines, quarries, and producing oil and gas wells:									
3	1954	5,981	5,980	52	13	32	7	5,882	5,789	xxx
4	1939	2,762	(NA)	68	...	66	2	2,673	(NA)	xxx
5	Number of preparation plants	58	57	6	...	1	5	10	xxx	10
	Value of shipments:[2]									
6	1954 $1,000	[2]313,659	[3]312,959	[2]15,699	(NA)	11,822	3,877	271,842	223,629	5,667
7	1939 do	38,871	(NA)	[3]11,078	(NA)	11,078	([3])	25,762	20,876	1,568
8	Value added in mining do	[2]258,503	[2]258,165	[2]12,234	(NA)	8,857	3,377	[5]226,348	193,467	([5])
9	Number of persons engaged, total	10,068	10,037	1,548	19	1,242	287	7,418	4,267	297
10	Production and development workers	7,491	7,460	1,401	13	1,138	250	5,212	2,537	255
11	All other employees	2,254	2,254	118	...	84	34	1,956	1,644	42
12	Proprietors and firm members	323	323	29	6	20	3	250	86	...
13	Performing manual labor	160	160	25	3	19	3	116	35	...
	Man-hours worked by production and development workers:									
14	1954 1,000	14,641	14,579	2,125	25	1,590	510	10,720	4,908	493
15	1939 do	10,189	(NA)	[3]5,639	...	5,639	([3])	3,698	2,084	292
	At mines:									
16	Underground do	1,494	1,494	1,201	10	953	238	xxx	xxx	xxx
17	Open-pit do	590	528	314	11	202	101	xxx	xxx	xxx
18	Surface (mine shops, yards, etc.) do	699	699	610	4	435	126	xxx	xxx	xxx
19	At preparation plants do	1,631	1,631		...		45	493	xxx	493
20	At oil and gas field operations do	10,227	10,227	xxx	...	xxx	xxx	10,227	4,908	xxx
21	Man-hours spent on development and exploration work (included above) do	6,036	6,036	27	19	...	8	5,955	1,720	xxx
22	Principal expenses designated below, total $1,000	147,143	146,658	9,183	96	7,245	1,842	[5]127,131	93,544	[5]3,879
23	Wages of production and development workers do	32,508	32,385	5,037	45	3,916	1,076	23,809	11,680	1,215
24	Salaries of all other employees do	13,339	13,339	570	3	379	188	11,819	9,831	268
25	Minerals received for preparation do	1,399	1,399	...	...	...	...	[5]33,698	xxx	[5]773
26	Supplies do	[6]38,258	37,896	2,233	15	1,789	429		19,659	
	Purchased fuel:									
27	Coal do	[6]19	19	14	...	...	14	...	...	...
28	Fuel oil do	[6]1,196	1,196	98	...	71	27	791	235	...
29	Gas do	[6]572	572	...	...	...	...	340	305	1
30	Other fuels do	[6]2,172	2,172	54	2	21	31	1,988	617	7
31	Purchased electric energy do	[6]1,534	1,534	247	...	212	35	969	865	81
32	Contract work do	[6]56,146	56,146	930	31	857	42	53,717	50,352	1,534
33	Purchased machinery installed do	[7]25,319	25,319	191	21	70	100	24,359	18,631	197
34	Capital expenditures, total do	[7]71,475	71,475	318	85	55	178	70,368	60,502	1,778
35	Development and exploration of mineral property do	[7]40,704	40,704	88	64	1	23	40,598	38,592	...
36	Preparation plant construction do	[7]1,713	1,713	54	...	...	54	1,571	xxx	1,571
37	Other construction do	[7]3,599	3,599	3	...	1	2	3,533	3,524	...
38	New machinery and equipment do	[7]23,803	23,803	95	20	31	44	23,190	18,129	203
39	Used plant and equipment do	[7]1,656	1,656	78	1	22	55	1,476	257	4
40	Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total 1,000	[7]682	682	137	3	115	19	474	232	43
41	Per production worker	91	91	98	([8])	101	76	91	91	168
42	Prime movers 1,000	[7]553	553	58	3	46	9	434	197	41
43	Electric motors driven by purchased energy do	[7]129	129	79	...	69	10	40	35	2
44	Horsepower rating of electric motors driven by energy generated at establishment do	[7]32	32	2	...	2	...	18	11	7
45	Energy used million kwh equivalent	[7]9,546	9,546	681	1	638	42	8,136	6,224	1,293
	Produced and used for fuel at same establishment:									
46	Coal 1,000 short tons	77	77	77	...	77	...	xxx	xxx	...
47	Crude petroleum 1,000 barrels	25	25	xxx	...	xxx	xxx	25	25	...
48	Natural gas million cu. ft.	20,412	20,412	xxx	...	xxx	xxx	20,412	16,249	4,163
	Purchased fuels:									
49	Coal 1,000 short tons	[7]2	2	2	...	...	2	...	...	...
50	Fuel oil 1,000 barrels	[7]260	260	22	...	15	7	144	46	...
51	Gas million cu. ft.	[7]4,844	4,844	...	...	...	...	3,203	2,846	2
52	Electric energy purchased million kwh	[7]132	132	20	...	16	4	82	72	8
53	Electric energy generated and used do	[7]101	101	5	...	5	...	68	34	33
54	Water intake, including mine water used million gallons	[7]14,605	14,605	193	...	161	32	2,541	2,158	235
55	Per production worker do	1.95	1.96	0.14	...	0.14	0.13	0.49	0.85	0.92

NA Not available. xxx Not applicable. [1]For industries included, see table 5. [2]See table 1, footnote 5. [3]Figures for metal mines and chemical and fertilizer mineral mining are included with those for Other industries. Data for one common clay or shale pit are included with those for Sand and gravel. [4]Figures for Drilling, repairing, and dismantling rigs and derricks, and Oil and gas field contract services, n.e.c., are included with those for Drilling oil and gas wells services. [5]No data were obtained on the value of gas received for processing at natural gas liquids plants or on the value of residue gas sold or transferred. However, the estimated value (prior to processing) of natural gas liquids

AND INDUSTRY, 1954 AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1939

size of establishments included for each year, see INTRODUCTION)

Crude petroleum and natural gas extraction—Continued			Nonmetallic minerals (except fuels) mining								
Oil and gas field contract services			Total		Crushed and broken stone (including operations classified in manufactures)	Sand and gravel	Bentonite	Nonmetallic minerals (except fuels) contract services	Chemical and fertilizer mineral mining	Other industries (including operations classified in manufactures)[1]	
Drilling oil and gas wells	Drilling, repairing, and dismantling rigs and derricks	Oil and gas field contract services, n.e.c.	Including operations classified in manufactures	Mineral industries only							
54	3	89	59	57	8	17	9	7	10	9	1
54	3	89	62	58	8	17	11	7	10	9	2
93	...	...	50	46	8	16	11	xxx	6	9	3
(NA)	(NA)	(NA)	21	(NA)	6	2	6	xxx	2	5	4
xxx	xxx	xxx	42	41	7	15	9	...	8	3	5
33,026	130	9,390	26,118	25,418	1,663	633	12,943	535	9,939	405	6
[4]3,318	([4])	([4])	[3]2,031	(NA)	367	[3]56	883	5	([3])	[3]720	7
22,075	103	6,901	19,921	19,583	1,103	319	10,389	308	7,503	299	8
1,835	14	1,005	1,102	1,071	146	100	217	40	576	23	9
1,586	11	823	878	847	131	77	185	31	433	21	10
209	...	61	180	180	11	4	25	...	140	...	11
40	3	121	44	44	4	19	7	9	3	2	12
16	3	62	19	19	1	12	...	4	...	2	13
3,491	16	1,812	1,796	1,734	261	147	424	70	855	39	14
[4]1,322	([4])	([4])	[3]852	(NA)	259	[3]42	155	3	([3])	[3]393	15
xxx	xxx	xxx	293	293	76	...	...	...	216	1	16
xxx	xxx	xxx	276	214	84	53	50	13	47	29	17
xxx	xxx	xxx	134	134	16	(NA)	6	57	52	3	18
xxx	xxx	xxx	1,093	1,093	85	94	368	...	540	6	19
3,491	16	1,812	...	...	...	...	...	...	...	...	20
3,415	16	804	54	54	2	1	15	25	11	...	21
22,466	81	6,111	10,829	10,344	1,118	569	3,372	329	5,260	181	22
7,560	54	3,300	3,662	3,539	528	289	655	118	1,994	78	23
1,428	...	292	950	950	40	9	107	...	794	...	24
xxx	xxx	xxx	349	349	...	(NA)	...	...	349	...	25
10,462	15	1,739	[6]3,377	3,015	[6]484	112	1,040	25	1,619	[6]97	26
...	...	...	[6]5	5	[6]2	...	...	...	3	...	27
517	...	39	[6]307	307	[6]9	35	162	32	68	[6]1	28
32	...	2	[6]232	232	...	3	27	...	202	...	29
884	12	468	[6]130	130	[6]14	46	31	33	4	[6]2	30
22	...	1	[6]318	318	[6]41	5	159	...	111	[6]2	31
1,561	...	270	[6]1,499	1,499	...	70	1,191	121	116	[6]1	32
4,633	13	885	[7]769	769	24	157	234	49	302	3	33
7,160	13	915	[7]789	789	14	114	290	33	338	...	34
2,006	...	...	[7]18	18	...	1	11	...	6	...	35
xxx	xxx	xxx	[7]88	88	...	11	49	...	28	...	36
4	...	5	[7]63	63	...	31	4	...	28	...	37
4,124	10	724	[7]518	518	14	61	186	9	248	...	38
1,026	3	186	[7]102	102	...	10	40	24	28	...	39
124	...	75	[7]71	71	[7]13	15	13	8	21	[7]1	40
78	...	91	81	84	[7]99	192	69	258	48	48	41
121	...	75	[7]61	61	[7]11	15	7	8	19	[7]1	42
3	...	...	[7]10	10	[7]2	([8])	6	...	2	...	43
...	...	...	[7]12	12	...	1	...	...	11	...	44
476	3	140	[7]729	729	[7]14	23	170	20	501	[7]1	45
...	...	...	xxx	xxx	...	...	...	...	...	...	46
...	...	...	xxx	xxx	xxx	...	...	...	...	...	47
...	...	...	xxx	xxx	xxx	...	...	...	...	...	48
...	...	...	([8])	([8])	([8])	...	...	...	([8])	...	49
91	...	7	[7]94	94	[7]3	7	63	6	15	([8])	50
318	...	37	[7]1,641	1,641	...	([8])	129	...	1,512	...	51
2	...	([8])	[7]30	30	[7]5	([8])	14	...	9	([8])	52
1	...	...	[7]28	28	...	...	...	...	28	...	53
140	...	8	[7]11,871	11,871	[7]22	65	1	([8])	11,783	...	54
0.09	...	0.01	13.52	14.01	0.17	0.84	0.01	xxx	20.46	...	55

contained in such gas is included in the industry group totals in order that the figures for cost of minerals received for preparation and the figures for value added in mining may bear a reasonable relationship to other statistics shown. Such estimated values are not included in the costs shown for the Natural gas liquids industries and no value added figure is shown for those industries. [6]Figures for fuels, electric energy, and contract work for crushed stone and clay operations classified in manufactures are included with figures for supplies. [7]Excludes statistics for crushed stone and clay operations classified in manufactures. [8]Less than one-half of the unit of measure specified.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Wyoming, all mineral operations:									
Including operations in manufactures	487	313,659	258,503	7,491	2,254	14,641	32,508	13,339	[2]69,819
Mineral industries only:									
Including crude petroleum and natural gas extraction	483	312,959	258,165	7,460	2,254	14,579	32,385	13,339	69,819
Excluding crude petroleum and natural gas extraction	115	41,117	31,817	2,248	298	3,859	8,576	1,520	927
Metal mining and Bituminous coal and lignite mining	55	[1]15,699	[1]12,234	1,401	118	2,125	5,037	570	240
Crude petroleum and natural gas extraction, total	370	271,842	[3]226,348	5,212	1,956	10,720	23,809	11,819	68,892
Crude petroleum and natural gas[4]	214	223,629	193,467	2,537	1,644	4,908	11,680	9,831	60,245
Natural gas liquids	10	5,667	([3])	255	42	493	1,215	268	1,774
Oil and gas field contract services[5]	146	42,546	29,079	2,420	270	5,319	10,914	1,720	6,873
Nonmetallic minerals (except fuels) mining, total:									
Including operations in manufactures	62	26,118	19,921	878	180	1,796	3,662	950	[2]687
Mineral industries only	58	25,418	19,583	847	180	1,734	3,539	950	687
Crushed and broken stone (including operations in manufactures)	8	1,663	1,103	131	11	261	528	40	[2]14
Sand and gravel	17	633	319	77	4	147	289	9	104
Chemical and fertilizer mineral mining	10	9,939	7,503	433	140	855	1,994	794	310
Nonmetallic minerals (except fuels) contract services	7	535	308	31	...	70	118	...	9
Clay, ceramic, and refractory minerals and Other industries (including operations in manufactures)	20	13,348	10,688	206	25	463	733	107	250
COUNTY									
Albany (mineral industries only):									
Including crude petroleum and natural gas extraction	10	(NA)	(NA)	[6]41	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas extraction	5	142	115	17	...	25	56	...	8
Big Horn, total	30	(NA)	(NA)	[6]295	([6])	(NA)	(NA)	(NA)	(NA)
Metal mining and Crude petroleum and natural gas extraction	26	(NA)	(NA)	[6]248	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	4	2,327	1,547	39	8	99	159	34	143
Campbell	3	(NA)	(NA)	[6]54	([6])	(NA)	(NA)	(NA)	(NA)
Carbon:									
Including crude petroleum and natural gas	23	(NA)	(NA)	[6]189	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	12	[1]1,043	[1]909	82	4	131	331	27	28
Bituminous coal	4	835	708	64	3	98	251	18	...
Crude petroleum and natural gas[7]	11	(NA)	(NA)	[6]107	([6])	(NA)	(NA)	(NA)	(NA)
Converse	21	(NA)	(NA)	[6]160	([6])	(NA)	(NA)	(NA)	(NA)
Crook:									
Including crude petroleum and natural gas	13	(NA)	(NA)	[6]89	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	10	[1]6,687	[1]5,343	78	9	186	300	33	33
Fremont:									
Including crude petroleum and natural gas	41	(NA)	(NA)	[6]304	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	12	[1]288	(NA)	56	4	119	220	11	180
Hot Springs, total	25	(NA)	(NA)	[6]271	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal and Sand and gravel	3	109	99	12	1	21	46	1	1
Crude petroleum and natural gas[7]	22	(NA)	(NA)	[6]259	([6])	(NA)	(NA)	(NA)	(NA)
Johnson	12	(NA)	(NA)	[6]129	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas[7]	9	(NA)	(NA)	[6]127	([6])	(NA)	(NA)	(NA)	(NA)
Laramie	6	(NA)	(NA)	[6]119	([6])	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN SELECTED COUNTIES, BY INDUSTRY GROUP: 1954—Continued

(For explanation of column captions, see INTRODUCTION)

County and industry group	Number of establishments	Value of shipments[1] ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
COUNTY—Continued									
Lincoln:									
Including crude petroleum and natural gas	11	(NA)	(NA)	[6]200	([6])	(NA)	(NA)	(NA)	(NA)
Excluding crude petroleum and natural gas	6	3,380	1,920	186	21	310	720	101	47
Natrona, total	53	(NA)	(NA)	[6]1,122	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas extraction[7]	46	(NA)	(NA)	[6]1,629	([6])	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining	7	216	152	24	4	45	72	13	16
Niobrara	18	(NA)	(NA)	[6]165	([6])	(NA)	(NA)	(NA)	(NA)
Park, total	30	(NA)	(NA)	[6]373	([6])	(NA)	(NA)	(NA)	(NA)
Crude petroleum and natural gas extraction[7]	21	(NA)	(NA)	[6]353	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal and Nonmetallic minerals (except fuels) mining	9	555	466	34	3	63	137	33	66
Platte	3	3,315	2,930	197	26	404	851	144	54
Sheridan (mineral industries only)	12	(NA)	(NA)	[6]174	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	5	1,371	804	109	6	174	393	13	11
Crude petroleum and natural gas[7]	4	(NA)	(NA)	[6]53	([6])	(NA)	(NA)	(NA)	(NA)
Sublette	5	(NA)	(NA)	[6]30	([6])	(NA)	(NA)	(NA)	(NA)
Sweetwater, total	21	(NA)	(NA)	[6]1,220	([6])	(NA)	(NA)	(NA)	(NA)
Bituminous coal	10	7,333	5,477	808	57	1,053	2,692	271	18
Crude petroleum and natural gas extraction	5	(NA)	(NA)	[6]71	([6])	(NA)	(NA)	(NA)	(NA)
Other industries	6	6,536	4,755	341	124	671	1,579	653	185
Uinta	5	(NA)	(NA)	[6]34	([6])	(NA)	(NA)	(NA)	(NA)
Washakie	16	(NA)	(NA)	[6]254	([6])	(NA)	(NA)	(NA)	(NA)
Weston, total	99	(NA)	(NA)	[6]797	([6])	(NA)	(NA)	(NA)	(NA)
Clay, ceramic, and refractory minerals and Nonmetallic minerals (except fuels) contract services	5	4,348	3,718	96	6	209	303	31	84
Crude petroleum and natural gas extraction	94	(NA)	(NA)	[6]701	([6])	(NA)	(NA)	(NA)	(NA)

NA Not available.

[1]See table 1, footnote 5.

[2]See table 2, footnote 7.

[3]See table 2, footnote 5.

[4]In general, companies in the Crude petroleum and Natural gas industries made only one report for all oil and gas field operations in each State. The only data by county which these reports contained were number of employees on March 15, 1954, and quantity of crude petroleum produced. The State total figure shown for number of establishments represents the number of State reports received and that shown for number of establishments in a county represents the number of reports that indicated any operations in the specified county.

[5]Contractors were requested to prepare one report for all oil and gas field contract services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. No data on the distribution of contract activities by county were obtained unless the company was also engaged in crude petroleum or natural gas production. The employee distribution for such companies is included with the county data for the Crude petroleum and Natural gas industries.

[6]Figures for "All other employees" are included with those for "Production and development workers."

[7]In addition to data for establishments classified in the Crude petroleum and Natural gas industries, includes data for some establishments classified in the Oil and gas field contract services industries which showed oil or gas production as a secondary activity.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Wyoming, total	Albany	Big Horn	Campbell	Carbon	Converse	Crook	Fremont	Goshen	Hot Springs	Johnson	Laramie
All mineral operations, total	487	12	30	3	23	21	13	41	1	25	12	6
Classified in mineral industries	483	10	30	3	23	21	13	41	1	25	12	6
Included in manufactures	4	2	...	...	...	...	...	...	...	...	...	...
Metal mining:												
Iron ores	2	...	...	...	...	...	...	...	...	...	...	...
Copper ores	1	...	...	...	...	...	...	1	...	...	...	...
Gold and silver ores:												
Lode gold	2	...	...	...	...	...	...	2	...	...	...	...
Placer gold	1	...	1	...	...	...	...	...	...	...	...	...
Silver ores	1	...	...	...	...	...	1	...	...	...	...	...
Metal mining contract services	1	1	...	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	13	...	...	...	5	...	1	5	...	...	1	...
Bituminous coal mining:												
Bituminous coal	32	...	...	1	4	1	...	2	...	2	1	...
Bituminous coal mining contract services	2	...	...	...	...	...	...	...	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	214	5	24	2	11	19	3	29	1	22	9	4
Natural gas liquids	10	...	1	...	1	...	...	1	...	...	...	...
Oil and gas field contract services[2]	146	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	4	...	...	...	...	...	...	...	...	...	...	1
Included in manufactures	1	1	...	...	...	...	...	...	...	...	...	...
Granite	1	...	...	...	...	...	...	...	...	...	...	1
Sandstone	1	...	...	...	1	...	...	...	...	...	...	...
Stone, n.e.c	1	...	...	...	...	...	...	...	...	...	...	...
Sand and gravel	17	3	...	...	...	...	...	1	...	1	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	11	...	2	...	...	...	4	...	...	...	1	...
Kaolin and ball clay	1	...	1	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	3	1	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Potash, soda, and borate minerals	3	...	...	...	1	...	...	...	...	...	...	...
Phosphate rock	1	...	...	...	...	...	...	...	...	...	...	...
Sulfur	3	...	...	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	3	...	...	...	...	...	...	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	7	...	1	...	...	...	4	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum	3	1	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	2	...	...	...	...	1	...	...	...	...	...	...

See footnotes at end of table.

Table 4.--NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND COUNTY: 1954—Continued

(For operations classified in the mineral industries represents total number of establishments; for operations classified in the manufacturing industries represents number of establishments including a mine or quarry)

Industry	Lincoln	Natrona	Niobrara	Park	Platte	Sheridan	Sublette	Sweetwater	Teton	Uinta	Washakie	Weston
All mineral operations, total	11	53	18	30	3	14	5	21	1	4	16	99
Classified in mineral industries	11	53	18	30	3	12	5	21	1	4	16	99
Included in manufactures	...	...	...	...	...	2	...	...	...	...	...	...
Metal mining:												
Iron ores	...	...	...	...	2	...	...	...	...	...	...	...
Copper ores	...	...	...	...	...	...	...	...	...	...	...	...
Gold and silver ores:												
Lode gold	...	...	...	...	...	...	...	...	...	...	...	...
Placer gold	...	...	...	...	...	...	...	...	...	...	...	...
Silver ores	...	...	...	...	...	...	...	...	...	...	...	...
Metal mining contract services	...	...	...	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	...	...	...	...	...	...	...	1	...	...	...	...
Bituminous coal mining:												
Bituminous coal	3	...	...	1	...	5	1	10	...	1	...	...
Bituminous coal mining contract services	1	...	...	...	...	...	...	1	...	...	...	...
Crude petroleum and natural gas extraction:												
Crude petroleum and natural gas[1]	5	45	17	20	...	4	4	4	...	2	12	93
Natural gas liquids	...	1	1	1	...	...	...	1	...	1	1	1
Oil and gas field contract services[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonmetallic minerals (except fuels) mining:												
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	...	1	...	...	1	...	...	...	1	...	...	...
Included in manufactures	...	...	...	...	...	...	...	...	...	...	...	...
Granite	...	...	...	...	...	...	...	...	...	...	...	...
Sandstone	...	...	...	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	...	...	...	...	...	...	...	...	...	...	1	...
Sand and gravel	1	3	...	2	...	2	...	3	...	...	1	...
Clay, ceramic, and refractory minerals:												
Bentonite	...	1	...	...	...	...	...	...	...	...	...	3
Kaolin and ball clay	...	...	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	...	...	...	...	...	2	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Potash, soda, and borate minerals	...	1	...	...	...	...	...	1	...	...	...	...
Phosphate rock	1	...	...	...	...	...	...	...	...	...	...	...
Sulfur	...	...	...	3	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	...	1	...	1	...	...	...	...	...	...	1	...
Nonmetallic minerals (except fuels) contract services	...	...	...	...	...	...	...	...	...	...	...	2
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum	...	...	...	2	...	...	...	...	...	...	...	...
Pumice and pumicite	...	...	...	...	...	1	...	...	...	...	...	...

NA Not available.
[1]See table 3, footnote 4, and for County figures, table 3, footnote 7.
[2]See table 3, footnote 5.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Industry group and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Wyoming, all mineral operations:												
Including operations classified in manufactures	487	57	209	62	58	52	31	12	6	...	...	...
Mineral industries only	483	56	208	60	58	52	31	12	6	...	...	...
Metal mining, total	21	5	12	2	1	...	...	1	...	...	...	...
Iron ores	2	...	...	1	...	...	...	1	...	...	...	...
Copper ores	1	1	...	...	...	...	...	...	...	...	...	...
Gold and silver ores:												
Lode gold	2	...	1	...	1	...	...	...	...	...	...	...
Placer gold	1	...	1	...	...	...	...	...	...	...	...	...
Silver ores	1	...	...	1	...	...	...	...	...	...	...	...
Metal mining contract services	1	...	1	...	...	...	...	...	...	...	...	...
Uranium-radium-vanadium ores	13	4	9	...	...	...	...	...	...	...	...	...
Bituminous coal mining, total	34	5	10	2	5	6	4	...	2	...	...	...
Bituminous coal	32	5	10	2	4	5	4	...	2	...	...	...
Bituminous coal mining contract services	2	...	...	...	1	1	...	...	...	...	...	...
Crude petroleum and natural gas extraction, total	370	40	155	54	44	38	25	11	3	...	...	...
Crude petroleum and natural gas	214	34	102	28	20	8	14	5	3	...	...	...
Natural gas liquids	10	1	...	2	3	1	3	...	...	...	...	...
Oil and gas field contract services:												
Drilling oil and gas wells	54	...	11	8	8	15	6	6	...	...	...	...
Building, repairing, and dismantling rigs and derricks	3	1	1	1	...	...	...	...	...	...	...	...
Oil and gas field contract services, n.e.c.	89	4	41	15	13	14	2	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total:												
Including operations classified in manufactures	62	7	32	4	8	8	2	...	1	...	...	...
Mineral industries only	58	6	31	2	8	8	2	...	1	...	...	...
Crushed and broken stone:												
Limestone:												
Classified in mineral industries	4	...	2	...	1	...	1	...	...	...	...	...
Included in manufactures	1	...	...	...	1	...	...	...	...	...	...	...
Granite	1	...	...	...	...	1	...	...	...	...	...	...
Sandstone	1	...	1	...	...	...	...	...	...	...	...	...
Stone, n.e.c.	1	...	1	...	...	...	...	...	...	...	...	...
Sand and gravel	17	1	12	3	...	1	...	...	...	...	...	...
Clay, ceramic, and refractory minerals:												
Bentonite	11	1	2	...	3	5	...	...	...	...	...	...
Kaolin and ball clay	1	1	...	...	...	...	...	...	...	...	...	...
Clay, ceramic, and refractory minerals, n.e.c. (included in manufactures)	3	1	1	...	1	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining:												
Potash, soda, and borate minerals	3	...	1	1	...	...	...	...	1	...	...	...
Phosphate rock	1	...	...	...	...	1	...	...	...	...	...	...
Sulfur	3	1	2	...	...	...	...	...	...	...	...	...
Chemical and fertilizer mineral mining, n.e.c.	3	1	...	...	1	...	1	...	...	...	...	...
Nonmetallic minerals (except fuels) contract services	7	...	6	...	1	...	...	...	...	...	...	...
Miscellaneous nonmetallic minerals (except fuels):												
Gypsum	3	...	3	...	...	...	...	...	...	...	...	...
Pumice and pumicite	2	1	1	...	...	...	...	...	...	...	...	...

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

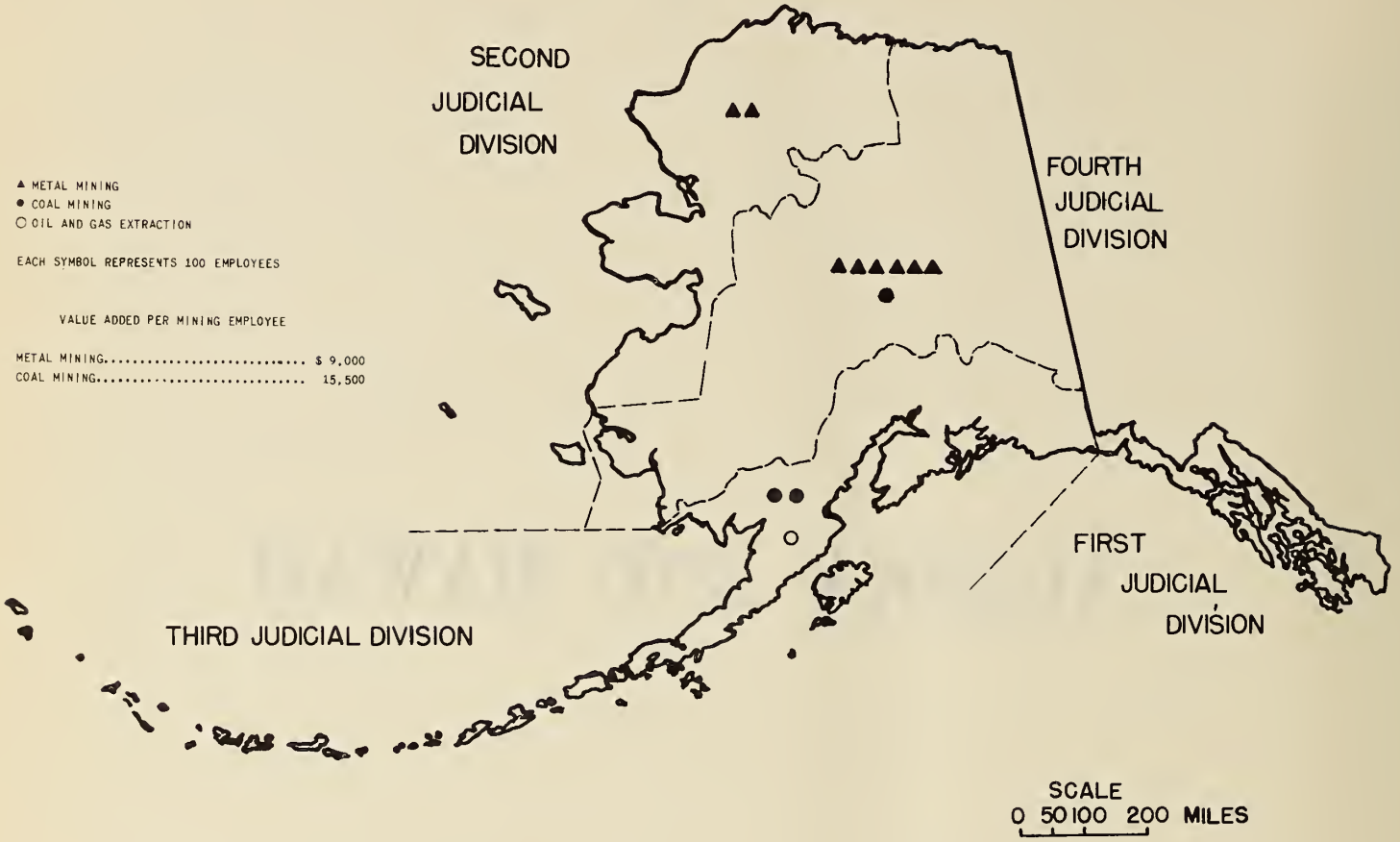
Industry group and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water)[1] (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source[2]			
			Million gallons	Million gallons per production worker[3]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Wyoming, total	7,460	258,165	14,599	1.96	57	14,283	6	324	43,503	...	16	40	44
Metal mining and Bituminous coal mining, total	1,401	12,234	193	0.14	16	155	...	295	193	12	13	74	1
Bituminous coal	1,138	8,857	161	0.14	18	125	...	264	161	14	...	85	[4]1
Other industries	263	3,393	32	0.12	9	30	...	31	32	...	81	19	...
Crude petroleum and natural gas extraction, total	5,212	[5]226,348	2,541	0.46	11	2,378	xxx	xxx	[6]3,572	1	75	20	4
Crude petroleum and natural gas	2,537	193,467	2,158	0.85	11	2,246	xxx	xxx	(NA)	([7])	79	18	3
Natural gas liquids	255	([5])	235	0.92	(NA)	123	xxx	xxx	1,266	...	...	...	...
Oil and gas field contract services:													
Drilling oil and gas wells	1,586	22,075	140	0.09	6	3	xxx	xxx	(NA)	7	64	...	29
Building, repairing, and dismantling rigs and derricks	11	103	...	...	...	...	xxx	xxx	...	...	...	...	...
Oil and gas field contract services, n.e.c.	823	6,901	8	0.01	1	6	xxx	xxx	(NA)	88	12	...	...
Nonmetallic minerals (except fuels) mining, total	847	19,583	11,865	14.01	606	11,750	6	17	39,738	...	3	44	53
Sand and gravel	77	319	65	0.84	204	55	...	...	71	11	74	...	[4]15
Bentonite	185	10,389	1	0.01	([7])	1	...	...	1	...	...	100	...
Chemical and fertilizer mineral mining	433	7,503	11,783	27.21	1,570	11,678	...	5	39,644	...	2	44	54
Nonmetallic minerals (except fuels) contract services	31	308	...	...	...	...	...	...	...	...	...	...	...
Other industries	121	1,064	16	0.13	15	16	6	12	22	...	...	100	...

NA Not available.
xxx Not applicable.
[1]Excludes water used for flooding in oil and gas fields.
[2]For the Crude petroleum and natural gas extraction industries represents a distribution of fresh water only. The total water intake for these industries includes 6 million gallons of brackish water.
[3]For computations of water intake per production worker, including mine water used, see table 2.
[4]Represents "not specified."
[5]See table 2, footnote 5.
[6]For industries other than Natural gas liquids, includes water intake only.
[7]Less than one-half of the unit of measure specified.

ALASKA AND HAWAII

150-1

MINING IN ALASKA. 1954



MINING IN HAWAII. 1954

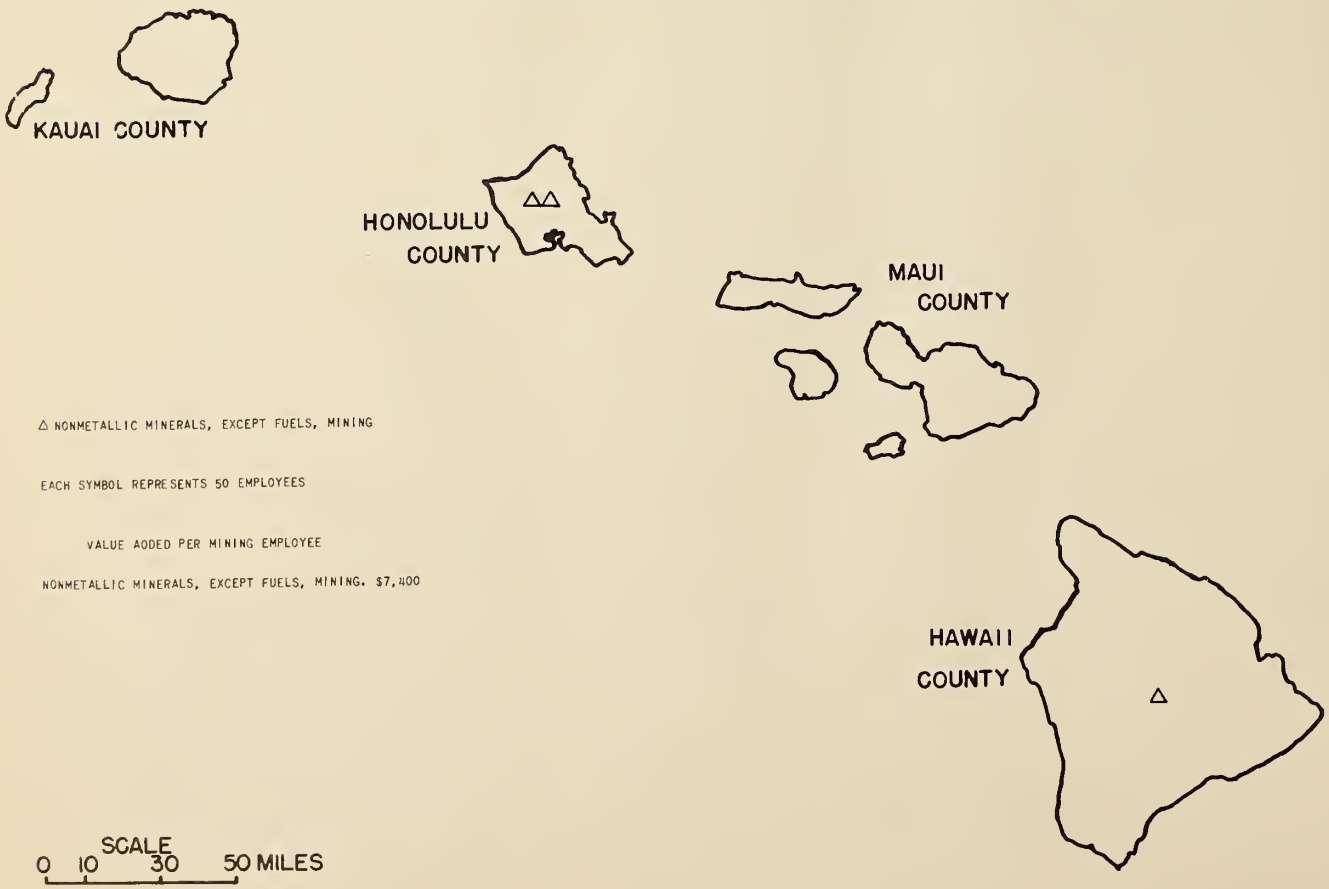


Table 1.—COMPARATIVE STATISTICS FOR MINERAL OPERATIONS: 1954, 1919, AND 1909

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION. For all years prior to 1939, excludes contract service operations)

Item	Alaska			Hawaii		
	1954[1]	1919[2]	1909[2]	1954[3]	1919	1909
Number of operating companies	187	(NA)	673	12	(NA)	4
Number of establishments	194	346	(NA)	13	5	(NA)
Number of mines and quarries	190	367	(NA)	13	5	6
Number of preparation plants	155	(NA)	(NA)	12	(NA)	(NA)
Value of shipments[4]....$1,000	19,753	15,635	16,933	1,778	251	21
Value added in mining....do	14,383	11,307	12,385	1,266	202	16
Number of persons engaged, total	1,678	3,267	5,308	175	155	45
Production and development workers	1,197	2,475	3,588	156	145	43
All other employees	239	199	219	15	6	...
Proprietors and firm members	242	593	1,501	4	4	2
Performing manual labor	215	505	441	2	...	...
Man-hours worked by production and development workers....1,000	2,990	(NA)	(NA)	320	(NA)	(NA)
Principal expenses designated below, total....$1,000	16,191	9,872	11,368	1,077	144	19
Wages of production and development workers....do	7,663	5,011	6,411	517	89	14
Salaries of all other employees....do	1,866	533	409	81	6	...
Minerals received for preparation....do	121	...	...	...	...	...
Supplies....do	3,082	2,790	2,635	240	34	5
Purchased fuel....do	1,750	1,080	268	54	15	...
Purchased electric energy....do	58			55		...
Contract work....do	1,651	458	1,645	130	...	...
Purchased machinery installed....do	3,305	(NA)		226		
Capital expenditures, total....do	4,597	(NA)		193		
Development and exploration of mineral property....do	677	1,202	(NA)	3	(NA)	(NA)
Preparation plant construction....do	581			7		
Other construction....do	261	(NA)		...		
New machinery and equipment....do	2,718			159		
Used plant and equipment....do	360			24		
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total....1,000	151	30	22	15	(5)	(5)
Per production worker	126	12	6	96	2	5
Prime movers....1,000	150	30	22	12		
Electric motors driven by purchased energy....do	1	(5)	(5)	3		
Horsepower rating of electric motors driven by energy generated at establishment....do	53	20	(5)	...		
Energy used....million kwh equivalent	677	(NA)		19	(NA)	(NA)
Coal....1,000 short tons	(D)	8		...		
Fuel oils....1,000 barrels	89	166	(NA)	5		
Gas....million cu.ft	2	...		...		
Electric energy purchased....million kwh	1	(NA)		2		
Electric energy generated and used....do	50			...		

D Withheld to avoid approximately disclosing figures for individual companies. NA Not available.

[1]Excludes data for sand and gravel pits operated as part of establishments primarily producing ready-mixed concrete or bituminous paving mixtures; 2 such pits were reported located in the Third judicial division and one in the Fourth judicial division.

[2]For 1919 and 1909, the Census reports indicated that coverage was incomplete, amounting to approximately 80 percent of the estimated total value of mineral products. For 1919, also excludes nonproducing operations; 6 such operations were reported for that year with 90 production and development workers and expenditures for development amounting to $350,000.

[3]Includes data for one crushed stone quarry operated as part of an establishment primarily producing ready-mixed concrete.

[4]Represents the gross value of shipments and contains some duplication due to the transfer of crude minerals from one establishment to another for preparation. The approximate magnitude of this duplication is indicated by the figures shown for cost of "Minerals received for preparation."

[5]Less than 500 horsepower.

Table 2.—DETAILED STATISTICS FOR MINERAL OPERATIONS BY INDUSTRY GROUP AND INDUSTRY, 1954, AND SELECTED COMPARATIVE STATISTICS, 1954 AND 1919

(For explanation of line captions and for statement on the minimum size of establishments included for each year, see INTRODUCTION)

Item	Alaska								Hawaii			
	Total	Metal mining				Bituminous coal mining	Crude petroleum and natural gas extraction	Nonmetallic minerals (except fuels) mining[1]	Total (Nonmetallic minerals (except fuels) mining)	Crushed and broken stone		Sand and gravel and Pumice and pumicite
		Total	Lode gold	Placer gold	Copper ores, Ferroalloy ores, and Miscellaneous metal ores					Trap rock[2]	Limestone and Stone, n.e.c.	
Number of operating companies	187	166	15	140	12	9	6	6	12	5	3	5
Number of establishments	194	172	15	145	12	10	6	6	13	5	3	5
Number of mines, quarries, and producing oil and gas wells:												
1954	190	171	14	145	12	13	...	6	13	5	3	5
1919[3]	367	357	[4]33	316	[5]8	8	([6])	2	5	(NA)	(NA)	(NA)
Number of preparation plants	155	148	9	133	6	2	...	5	12	5	3	4
Value of shipments:[7]												
1954...$1,000	19,753	11,082	160	8,865	2,057	6,584	(D)	(D)	1,778	1,158	345	275
1919[3]...do	15,635	[8]15,155	[4]11,517	3,566	[4 8]72	334	([8])	[8]146	251	(NA)	(NA)	(NA)
Value added in mining...do	14,383	8,623	119	6,692	1,812	5,777	([9])	([9])	1,266	848	264	154
Number of persons engaged, total:												
1954	1,678	1,194	58	969	167	375	73	36	175	132	39	4
1919[3]	3,267	[8]3,018	[4]1,887	1,109	[4 8]22	164	([8])	[8]85	155	(NA)	(NA)	(NA)
Production and development workers	1,197	819	36	651	132	315	35	28	156	121	33	2
All other employees	239	141	4	113	24	58	38	2	15	10	5	...
Proprietors and firm members	242	234	18	205	11	2	...	6	4	1	1	2
Performing manual labor	215	210	17	183	10	2	...	3	2	...	...	2
Man-hours worked by production and development workers...1,000	2,990	2,151	94	1,755	302	688	75	76	320	240	79	1
At mines:												
Underground...do	442	91	(D)	(D)	79	351	...	...	...	...	...	...
Open-pit...do	1,740	1,519	...	1,460	59	179	...	42	155	123	31	1
Surface (mine shops, yards, etc.)...do	808	388	(D)	(D)	94	158	75	...	52	41	11	...
At preparation plants...do		153	...	83	70		...	34	113	76	37	...
Man-hours spent on development and exploration work (included above)...do	196	87	9	22	56	34	75	...	...	...	...	...
Principal expenses designated below, total...$1,000	16,191	8,967	248	7,087	1,632	4,515	2,336	373	1,077	754	199	124
Wages of production and development workers...do	7,663	4,699	194	3,645	860	2,484	190	290	517	410	104	3
Salaries of all other employees...do	1,866	1,011	12	793	206	626	219	10	81	53	28	...
Minerals received for preparation...do	121	...	...	...	...	121	...	...	...	...	...	...
Supplies...do	3,082	1,765	29	1,402	334	632	668	17	240	190	49	1
Purchased fuel:												
Coal...do	(D)	(D)	...	(D)	...	...	...	...	...	...	...	...
Fuel oil...do	873	584	3	416	165	171	74	44	22	16	6	...
Gas...do	1	...	...	...	...	...	...	1	...	...	...	...
Other fuels...do	(D)	(D)	(D)	(D)	48	42	10	10	32	26	6	...
Purchased electric energy...do	58	...	...	...	...	57	...	1	55	51	4	...
Contract work...do	1,651	94	(D)	(D)	19	382	1,175	...	130	8	2	120
Purchased machinery installed...do	3,305	563	5	363	195	678	1,862	202	226	164	62	...
Capital expenditures, total...do	4,597	1,361	6	839	516	1,276	1,888	72	193	145	48	...
Development and exploration of mineral property...do	677	372	6	74	292	275	...	30	3	3	...	...
Preparation plant construction...do	581	90	...	90	...	491	...	...	7	4	3	...
Other construction...do	261	(D)	...	140	(D)	47	(D)	...	...	...	...	...
New machinery and equipment...do	2,718	495	...	317	178	363	(D)	(D)	159	114	45	...
Used plant and equipment...do	360	(D)	...	218	(D)	100	(D)	(D)	24	24	...	...
Horsepower rating of power equipment (prime movers and electric motors driven by purchased energy), total...1,000	151	123	24	85	14	15	3	10	15	12	3	...
Per production worker	126	150	([10])	130	106	47	87	357	96	99	91	...
Prime movers...1,000	150	123	24	85	14	14	3	10	12	9	3	...
Electric motors driven by purchased energy...do	1	...	...	...	...	1	...	...	3	3	...	...
Horsepower rating of electric motors driven by energy generated at establishment...do	53	52	13	36	3	1	...	...	...	...	...	...
Energy used...million kwh equivalent	677	590	3	548	39	60	17	10	19	14	5	...
Coal...1,000 short tons	(D)	(D)	...	(D)	...	[11]3	...	...	...	...	...	...
Fuel oil...1,000 barrels	89	62	1	45	16	15	8	4	5	3	2	...
Gas...million cu.ft	2	...	...	...	...	...	...	2	...	...	...	...
Electric energy purchased...million kwh	1	...	...	...	...	1	...	...	2	2	([12])	...
Electric energy generated and used...do	50	49	6	36	7	1	...	...	...	...	...	...
Water intake, including mine water used...million gallons	39,150	38,247	103	34,836	3,308	885	3	15	17	(D)	(D)	...
Per production worker...do	32.71	46.70	([10])	53.51	25.06	2.81	0.09	0.54	0.11	(D)	(D)	...

D Withheld to avoid approximately disclosing figures for individual companies. [1]See table 1, footnote 1. [2]See table 1, footnote 3. [3]See table 1, footnote 2. [4]Figures for copper ores and "other lode mines" are included with those for "lode gold." [5]Represents tin placers and chromite ore. [6]One petroleum establishment was reported. [7]See table 1, footnote 4. [8]Figures for one chromite establishment and one petroleum establishment are included with those for marble and gypsum shown under "Nonmetallic minerals (except fuels) mining." [9]The sum of the figures for minerals received for preparation, supplies, purchased fuel, purchased electric energy, contract work, and purchased machinery installed for the Crude petroleum and natural gas extraction and for the Nonmetallic minerals (except fuels) mining industries exceeds the sum of the figures for value of shipments and capital expenditures by $17,000. [10]Not computed since the number of proprietors and firm members performing manual labor exceeds one-third of the number of production and development workers. [11]Represents bituminous coal produced and used in the same establishment for power or heat. [12]Less than 500,000. NA Not available.

Table 3.—GENERAL STATISTICS FOR MINERAL OPERATIONS IN JUDICIAL DIVISIONS OR COUNTIES, BY INDUSTRY GROUP: 1954

(For explanation of column captions, see INTRODUCTION)

Territory, judicial division or county, and industry group	Number of establishments	Value of shipments ($1,000)	Value added in mining ($1,000)	Number of employees: Production and development workers	Number of employees: All other employees	Man-hours worked by production and development workers (1,000)	Wages and salaries: Production and development workers ($1,000)	Wages and salaries: All other employees ($1,000)	New capital expenditures ($1,000)
Alaska, total	194	19,753	14,383	1,197	239	2,990	7,663	1,866	4,237
Metal mining	172	11,082	8,623	819	141	2,151	4,699	1,011	[1]1,361
Gold	160	9,025	6,811	687	117	1,849	3,839	805	627
Copper ores, Ferro-alloy ores, and Miscellaneous metal ores	12	2,057	1,812	132	24	302	860	206	[1]516
Bituminous coal mining	10	6,584	5,777	315	58	688	2,484	626	1,176
Crude petroleum and natural gas extraction	6	2,087	([2])	35	38	75	190	219	[1]1,888
Nonmetallic minerals (except fuels) mining[3]	6			28	2	76	290	10	[1]72
First judicial division	10	109	112	38	...	97	199	...	36
Second judicial division	36	1,509	958	253	38	600	1,238	276	222
Gold	32	1,114	680	177	34	478	893	245	84
Third judicial division, total	42	4,562	1,064	231	75	553	1,874	498	2,552
Metal mining	30	451	588	22	5	65	213	20	384
Crude petroleum and natural gas extraction	6	4,111	476	35	38	75	190	219	2,168
Bituminous coal mining and Sand and gravel	6			174	32	413	1,471	259	
Fourth judicial division, total	106	13,573	12,249	675	126	1,740	4,352	1,092	1,427
Metal mining	99	9,125	7,047	528	98	1,406	3,072	715	516
Gold	95	7,644	5,854	468	80	1,260	2,705	551	469
Bituminous coal mining and Sand and gravel	7	4,448	5,202	147	28	334	1,280	377	911
Hawaii (Nonmetallic minerals (except fuels) mining), total	13	1,778	1,266	156	15	320	517	81	169
Crushed and broken stone[4]	8	1,503	1,112	154	15	319	514	81	169
Sand and gravel and Nonmetallic minerals, n.e.c.	5	275	154	2	...	1	3	...	...
Honolulu county	7	1,170	820	92	9	183	327	53	113

[1]Includes expenditures for plant and equipment which are excluded in the Alaska total.
[2]See table 2, footnote 9.
[3]See table 1, footnote 1.
[4]See table 1, footnote 3.

Table 4.—NUMBER OF MINERAL OPERATIONS, BY INDUSTRY AND JUDICIAL DIVISION OR COUNTY: 1954

(For operations classified in the mineral industries, represents total number of establishments; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry)

Industry group and industry or subindustry	Alaska, total	First judicial division	Second judicial division	Third judicial division	Fourth judicial division
All operations, total	194	10	36	42	106
Metal ores:					
Copper ores	2	...	1	1	...
Gold:					
Lode	15	6	1	6	2
Placer	145	2	31	19	93
Ferro-alloy ores:					
Tungsten ores	1	...	...	1	...
Chromium ores	2	...	...	2	...
Miscellaneous metal ores:					
Mercury ores	2	...	...	1	1
Antimony ores	1	...	...	...	1
Platinum minerals	2	...	...	...	2
Tin ores	2	...	2	...	...
Bituminous coal mining	10	...	1	5	4
Crude petroleum and natural gas extraction:					
Crude petroleum and natural gas	5	...	...	5	...
Drilling oil and gas wells contract services	1	...	...	1	...
Nonmetallic minerals (except fuels) mining:					
Sand and gravel	[1]5	1	...	[1]1	[1]3
Miscellaneous nonmetallic minerals:					
Mica	1	1	...	...	...

Industry group and industry or subindustry	Hawaii, total	Hawaii	Honolulu	Kauai	Maui
All operations, total	[2]13	3	[2]7	2	1
Nonmetallic minerals (except fuels) mining:					
Crushed and broken stone:					
Limestone	2	...	1	1	...
Trap rock	[2]5	2	[2]2	...	1
Stone, n.e.c.	1	...	...	1	...
Sand and gravel	3	...	3	...	...
Miscellaneous nonmetallic minerals:					
Pumice and pumicite	2	1	1	...	...

[1]See table 1, footnote 1.
[2]See table 1, footnote 3.

Table 5.—NUMBER OF MINERAL OPERATIONS CLASSIFIED BY EMPLOYMENT SIZE, BY INDUSTRY: 1954

(For operations classified in the mineral industries, represents number of establishments classified by employment size of establishment; for operations classified in the manufacturing industries, represents number of establishments including a mine or quarry classified by employment size of the mine or quarry)

Territory, industry group, and industry or subindustry	Total, all operations	Operations with an average of—										
		No employees	1-4 employees	5-9 employees	10-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 and over
Alaska, total	194	113	45	16	6	8	3	2	1	...	....	...
Metal mining, total	172	110	41	9	5	4	1	1	1	...	...	...
Copper ores	2	...	1	1	...	...	...	...	...	...	...	...
Gold:												
Lode	15	9	4	1	...	1	...	...	...	...	...	...
Placer	145	97	34	7	4	1		1	1	...	...	...
Ferro-alloy ores:												
Tungsten ores	1	1	...	...	...	...	...	...	...	...	...	...
Chromium ores	2	1	...	...	1	...	...	...	...	...	...	...
Miscellaneous metal ores:												
Mercury ores	2	1	...	...	...	1	...	...	...	...	...	...
Antimony ores	1	...	1	...	...	...	...	...	...	...	...	...
Platinum minerals	2	1	...	...	...	1	...	...	...	...	...	...
Tin ores	2	...	1	...	...	...	1	...	...	...	...	...
Bituminous coal mining	10	...	2	3	1	1	2	1	...	...	...	...
Crude petroleum and natural gas extraction, total	6	1	...	3	...	2	...	...	...	...	...	...
Crude petroleum and natural gas	5	1	...	3	...	1	...	...	...	...	...	...
Drilling oil and gas wells contract services	1	...	...	...	...	1	...	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	6	2	2	1	...	1	...	...	...	...	...	...
Sand and gravel[1]	5	1	2	1	...	1	...	...	...	...	...	...
Mica	1	1	...	...	...	...	...	...	...	...	...	...
Hawaii, total	[2]13	4	1	1	[2]5	1	1	...	...	...	...	...
Nonmetallic minerals (except fuels) mining, total	[2]13	4	1	1	[2]5	1	1	...	..	...	...	...
Crushed and broken stone:												
Limestone	2	...	...	1	1	...	....	...	...	...	...	...
Trap rock	[2]5	...	...	...	[2]3	1	1	...	...	...	...	...
Stone, n.e.c.	1	...	...	...	1	...	...	...	...	...	...	...
Sand and gravel	3	3	...	...	...	...	...	...	...	...	...	...
Pumice and pumicite	2	1	1	...	...	...	...	...	...	...	...	...

[1]See table 1, footnote 1.
[2]See table 1, footnote 3.

Table 6.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY GROUP AND INDUSTRY: 1954

(For explanation of column captions, see INTRODUCTION)

Territory, industry group, and industry	Number of production and development workers	Value added in mining ($1,000)	Water intake (except mine water)			Water discharged (except mine water) (mil. gal.)	Mine water (mil. gallons)		Gross water use, including recirculation (mil. gal.)	Percent of total water intake (except mine water) by principal source			
			Million gallons	Million gallons per production worker[1]	Gallons per dollar value added		Used	Drained and discharged		Public water systems	Company surface water systems	Company ground water systems	Combinations and not specified
Alaska, total	1,197	14,383	21,739	18.16	1,511	[2]21,728	17,411	185	55,695	...	99	([3])	1
Metal mining, total	819	8,623	20,871	25.48	2,420	[2]20,864	17,376	61	54,777	...	99	([3])	1
Gold:													
Lode	36	119	28	([4])	235	23	75	60	103	...	93	...	7
Placer	651	6,692	20,835	32.00	3,113	([2])	14,001	([2])	50,363	...	99	...	[5]1
Copper ores, Ferro-alloy ores, and Miscellaneous metal ores	132	1,812	8	0.06	4	6	3,300	1	4,311	...	88	12	...
Bituminous coal mining	315	5,777	850	2.70	147	849	35	124	895	...	100	...	...
Crude petroleum and natural gas extraction	35	([6])	3	0.09	(D)	...	xxx	xxx	3	...	100	...	...
Nonmetallic minerals (except fuels) mining	28	([6])	15	0.54	(D)	15	...	...	20	...	60	40	...
Hawaii	156	1,266	17	0.11	13	17	...	...	17	23	71	...	[5]6

D Withheld to avoid approximately disclosing figures for individual companies.
xxx Not applicable.
[1]For computations of water intake per production worker, including mine water used, see table 2.
[2]Due to the nature of placer gold operations, particularly the preponderant use of surface water systems such as creeks, other streams, and lakes in sluicing and washing, water discharge is approximately the same as water intake and drainage of mine water is negligible. The 1954 census report forms did not provide for information on water discharge or drainage for such operations, but in industry group and Territory totals a figure for water discharge equal to water intake has been included for placer gold operations.
[3]Less than 0.5 percent.
[4]See table 2, footnote 10.
[5]Represents "not specified."
[6]See table 2, footnote 9.

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Appendix A

Minerals Census Report Forms and Punch Cards

In conducting the 1954 Census of Mineral Industries, 34 different establishment forms were used. These included 26 standard forms provided for large and multiestablishment companies and 6 short forms used for certain small establishments. In addition, a few special purpose forms were used.

The establishment forms were all similar. For the 26 standard forms, the principal adaptations to specific industries were made in Item 3, Nature of operations; Item 5, Man-hours of production, development, and related employees, by department; Item 6A, Purchased supplies used; Item 10, Products and services; Item 11; and Item 12. For operators of mineral properties in Major Groups 10, 11, 12, and 14, Item 11 provided data on minerals received for preparation; and for all industries in these groups, Item 12 provided figures on number of mechanical-power loading and excavating machines, by type. For the crude petroleum and natural gas industries, Item 11 yielded county data; for the oil- and gas-field contract services industries, it provided State data; and for other mineral contract services industries, it provided State and county data. For the crude petroleum and natural gas industries and the oil- and gas-field contract services industries, Item 12 yielded data on cost of drilling and equipping wells; and for the natural gas liquids industries, it provided data on bulk storage capacity.

Form MC-10B, Copper, Lead, Zinc, Lode Gold, and Silver Ores (see pages App. A-2 thru A-7) is representative of the report forms used for operators of metal ores properties; Form MC-12A, Bituminous Coal and Lignite (see pages App. A-14 thru A-19), is similar to the form used for operators of anthracite properties; Form MC-14A, Stone (see pages App. A-36 thru A-39) is representative of the forms used for operators of nonmetallic minerals (except fuels) mining properties; and Form MC-13C, Oil and Gas Field Contract Services (see pages App. A-28 thru A-31), indicates the type of information requested for contract service operations. The standard form used for the crude petroleum and natural gas industries is shown on pages App. A-20 thru A-23.

The complete instructions provided for Form MC-10B are shown on pages App. A-8 thru A-13. These are typical of all instructions used for the report forms, although 11 slightly varied sets of general instructions were issued for individual forms or groups of forms. The more significant variations introduced for oil- and gas-field operations are shown on pages App. A-24 thru A-27 and pages App. A-32 and A-33. Examples of special instructions for uranium ores operations and stone quarries operated as part of manufacturing establishments are shown on pages App. A-13 and on page A-40.

Although 6 short forms were provided, only 3 of these were actually used for making tabulations and only about 1,500 of the approximately 38,000 reports in the minerals census were tabulated from short forms. Most of these were for the crude petroleum and natural gas industries. A copy of the short form MC-13S, Oil and Gas, is shown on pages App. A-34 and A-35.

Some special purpose forms were also used, such as a form on distribution of bituminous coal and lignite, a form on offshore oil and gas operations, and a form for separately operated central offices and auxiliary units (see also Introduction, page 5).

The punch cards used in tabulating the 1954 Census of Mineral Industries data are shown on page App. A-41.

Form approved; Budget Bureau No. 41-54436.

CONFIDENTIAL.—This report should be returned within 30 days of its receipt. This report is required by Act of Congress (13 U. S. C. 131). Your report is confidential and only sworn Census employees will have access to it. It cannot be used for purposes of taxation, investigation, or regulation.

The 1954 Census of Mineral Industries is being conducted by the Bureau of the Census in cooperation with the Bureau of Mines (U. S. Department of the Interior) in order to minimize duplication in canvassing mineral establishments. The Bureau of Mines mineral surveys on Forms 6-1177-A, Production of Lead and Zinc; 6-1177-S, Custom Lead and Zinc Ore Mills; and 6-1178-A, Lode-Mine Production of Gold, Silver, Copper, Lead, and Zinc, will not be conducted for 1954. Unless you make written objection in the "Remarks" section of the present form: (1) a copy of Items 1, 2, 3, 10, 11, and 12 will be made available to the Bureau of Mines for use in its usual manner for annual statistical surveys, including furnishing information to Defense Agencies; and (2) transcripts of Items 1, 2, 3, and 10 will be furnished to the geological or similar staff of the State in which your establishment is located if that State is one with which the Bureau of Mines has a cooperative statistical agreement.

A separate report is required for each mine or separately operated mill. **Please read enclosed instructions before completing report.**

Form MC- **10 B**

U. S. DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

1954 CENSUS OF MINERAL INDUSTRIES

Copper, Lead, Zinc, Lode Gold, and Silver Ores

(Please correct any errors in name and address)

FOR CENSUS USE ONLY

State	SMA / SEA	County	City	City size	T. E.	V. A.	Industry	C/O	T. O.

ITEM 1 — NAME AND LOCATION OF ESTABLISHMENT COVERED BY THIS REPORT

Name and location of establishment (a)	Mine (b)	Mill (c)
A. Name of operation		
B. Location		
1. Minor civil division (Where applicable, report section, township, and range)		
2. County		
3. State		
C. City or village (within which or nearest which located)		
D. Mining district		

ITEM 2 — NAME AND STATUS OF OPERATING COMPANY

A. Name and address

B. Federal Social Security Employer Identification Number
1. Enter number as reported on Form 941, Item 10, on latest employer's quarterly tax return under Federal Insurance Contributions Act _____

2. Number of separate establishments operated under this Employer Identification Number _____ ☐ One ☐ Two or more

C. Form of ownership of operating company (Check one)
☐ Individual proprietor ☐ Partnership ☐ Corporation (Do not include any form of cooperative association) ☐ Cooperative association (corporate or noncorporate) ☐ Other (Specify)

D. Company affiliation
1. Is this company (identified by the number given in Item 2B1) owned or controlled by another company? ☐ Yes ☐ No
2. If "Yes," give name and address of owning or controlling company _____
3. Does this company (identified by the number given in Item 2B1) own or control another company? ☐ Yes ☐ No

E. Change in status of operation of this establishment since December 31, 1953 (Check)
1. ☐ Operated by you during all of 1954
2. ☐ Purchased or leased by you on _____ (date)
3. ☐ Sold or leased to another operator on _____ (date)
4. ☐ Did not operate in 1954
5. ☐ Went out of business (no new operator) on _____ (date)

Give name and address of former owner or lessee (if box "2" is checked) or purchaser or lessee (if box "3" is checked):

NOTE.—A report is required even if establishment operated part for of 1954 only or produced no minerals in 1954.

F. Status of establishment if no minerals were produced during 1954 (Check one)
☐ Development and exploration work only ☐ Idle ☐ Abandoned ☐ Exhausted

ITEM 3 — NATURE OF OPERATIONS COVERED BY THIS REPORT

A. Nature of activity. (Describe briefly the kind of activity of this establishment.)

B. Type of operation. (Check one or more.) ☐ Underground mine ☐ Open-pit mine ☐ Mill ☐ Other (Specify) _____

C. Underground mining methods used. (Check one or more and **underscore** the dominant method.)
☐ Open stoping (including room-and-pillar and sublevel stoping)
☐ Shrinkage stoping ☐ Square-setting ☐ Sublevel caving
☐ Cut-and-fill stoping ☐ Block caving ☐ Top slicing
☐ Other (Specify) _____

D. Milling methods used. (Check one or more and **underscore** the dominant method.)
☐ Flotation ☐ Straight gravity ☐ Amalgamation
☐ Cyanidation ☐ Sink and float
☐ Other (Specify) _____

ITEM 4 — EMPLOYMENT AND PAYROLLS IN 1954, BY CLASS OF EMPLOYEE (Include workers paid on a tonnage basis. Exclude employees of contractors.) (See General Instructions.)

Class of persons (a)	Number of employees in 1954 — Pay period ended nearest 15th of— Jan. (b)	Feb. (c)	Mar. (d)	Apr. (e)	May (f)	June (g)	July (h)	Aug. (i)	Sept. (j)	Oct. (k)	Nov. (l)	Dec. (m)	Average employment (Total of (b) thru (m)÷12) (n)	Total 1954 payrolls (wages, salaries, bonuses, commissions, and other remuneration paid in entire year, before deductions) (omit cents) (o)
A. Production, development, and related employees													A1	A2 $
B. All other employees														$
C. Total, all employees (Sum of A and B)	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12*	A3	A4 $
D. Proprietors or firm members (not applicable to corporations)													C1	
E. Proprietors or firm members (included in "D" above) regularly performing production, development, and related work at this establishment													C2	

ITEM 5 MAN-HOURS OF PRODUCTION, DEVELOPMENT, AND RELATED EMPLOYEES IN 1954, BY DEPARTMENT (Do not include hours for paid vacations, holidays, or sick leave.)

Department (a)		Code B1X	Total man-hours worked during 1954 B6* (b)
A. At mine	1. Underground (mining and development)	11	
	2. Open-pit (mining and stripping)	15	
	3. Surface (including mine shops and yards)	31	
B. At mill (including auxiliary works for this mill)		41	
C. Total, all production, development, and related workers (Sum of A and B)		90	A5
D. Man-hours included above which were spent on development and exploration work [1]		51	

[1] Report total man-hours in 1954 devoted to development and exploration work charged to capital, depletion, or Defense Minerals Exploration Administration accounts, such as shaft sinking, exploration drilling, and overburden stripping charged to such accounts.

ITEM 6 SUPPLIES, FUELS, ELECTRIC ENERGY, CONTRACT WORK, AND MACHINERY IN 1954

Include all such items charged to both current and capital accounts. (Costs charged to capital accounts should also be included in Item 9.) Report totals for supplies, fuels, and machinery actually used or installed in 1954, whether purchased, withdrawn from inventories, or received from other establishments of this company. "Cost" refers to amounts actually paid or payable after discounts, and includes freight and other direct charges incurred in acquiring the items. Report the approximate commercial values of items transferred from other establishments of this company. Contract work should include amounts paid or due contracting concerns for work done during 1954 in the operation or development of this establishment, such as pumping, tunneling, shaft sinking, stripping, boring test holes, shop work, repair work, and construction.

Item (a)	Code D1	Unit of measure (b)	Quantity D2 (c)	Total cost (omit cents) D3* (d)
A. Supplies used				
1. Explosives	02	Pound		$
2. Steel mill shapes and forms (See General Instructions)	03	Short ton		$
3. All other supplies (See General Instructions)	04			$
4. Does this establishment produce lumber for its own use? (Check one) (05) ☐ Yes (06) ☐ No				
B. Fuels used. (Check the kinds of fuels used.)				
1. Coal: (11) ☐ Bituminous or lignite (12) ☐ Pennsylvania anthracite		Short ton		$
2. Fuel oil: (31) ☐ Distillate (light) (32) ☐ Residual (heavy)		Bbl. (42 gals.)		$
3. Gas: (41) ☐ Natural (42) ☐ Manufactured or mixed		M cu. ft.		$
4. Other fuels: ☐ Gasoline ☐ Liquefied petroleum gas ☐ Wood ☐ Coke ☐ Other	50			$
C. Electric energy (Exclude energy purchased for resale)		E1, 2		
1. Purchased	60	kwh.		$
2. Generated (gross less generating-station use)		kwh. E3		
3. Sold (In "Cost" column report value of energy sold)		kwh. E4.5*		$
D. Contract work done for you by others	70			$
E. Purchased machinery installed (Include all new and used machinery, equipment, parts, and used plant not included above)	80			$
F. **Total** cost of supplies, fuels, purchased electric energy, contract work, and machinery (Sum of A, B, C1, D, and E)	0V			$

ITEM 7 WATER USE DURING 1954

Report water (fresh plus brackish) intake, discharge, and use, in mine and in mill, for entire year 1954. Include water furnished without charge to your contractors for use at this establishment. **Estimates are acceptable wherever exact records are not available.** If total intake, and also total pumped for drainage, was less than 10 million gallons, complete only sections A and E.

Item (a)		Gallons for the entire year (in millions) (b)
A. Water intake (except mine water)		C3
B. Water discharged (except mine water)		C4
C. Mine water	1. Used, such as intake for mill	C5
	2. Drained and discharged	C6
D. Was any water recirculated or re-used? (Check one) ☐ Yes ☐ No If "Yes," show estimated total amount of water which would have been required if no water had been recirculated or re-used		C7
E. Principal source of fresh water intake, except mine water. (Check appropriate box) (1) ☐ Public water systems (municipally or privately owned) (2) ☐ Company surface water systems (3) ☐ Company ground water systems		C8*

ITEM 8 HORSEPOWER RATING OF POWER EQUIPMENT AT END OF 1954

The figures given should represent **total** horsepower rating of equipment in use or **available for use at the end of 1954.** Include emergency or stand-by equipment and equipment temporarily idle because in need of repairs; exclude only junk. Both stationary and mobile equipment should be included. Report horsepower rating indicated on name plates.

Kind of power equipment (a)	Code F1	Total horsepower rating of— Loading equipment [1] F2 (b)	Transportation equipment [2] F3 (c)	All other [3] F4* (d)
A. Internal-combustion engines, steam engines and turbines, and other prime movers				
1. In highway-type equipment	11		hp.	
2. In all other equipment				
a. Driving generators	12	hp.	hp.	hp.
b. Not driving generators	13	hp.	hp.	hp.
B. Electric motors (1 horsepower and over)	14	hp.	hp.	hp.

[1] Include power units for shovels, dragline excavators, scrapers, and other mechanical loading equipment, both underground and surface.
[2] Include power units for locomotives, tractors, trucks, shaft hoists, and other haulage units.
[3] Include power units for churn drills, compressors, machine tools, pumps, mill machinery, etc.

ITEM 9 CAPITAL EXPENDITURES FOR THIS ESTABLISHMENT DURING 1954 (Exclude expenditures for land and mineral rights.)

Expenditures refer to all costs actually incurred during 1954, whether on contract or by your own forces, which are chargeable to the fixed assets accounts of this establishment and which are of the type for which depreciation, depletion, or Defense Minerals Exploration Administration accounts are ordinarily maintained. Do not include cost of maintenance and repairs charged as current operating expense.

Item (a)	FOR CENSUS USE ONLY A6. G1	A7. G2	A8	A9*	Expenditures (omit cents) (b)
A. Development and exploration of mineral properties and new construction and major alterations of buildings and other fixed plants and structures					
1. Development and exploration of mineral property				G3	$
2. Mill construction and major alterations				G4	$
3. Other construction and major alterations				G5	$
B. New machinery and equipment				G6	$
C. Used plant and used equipment acquired from others				G7	$
D. **Total** capital expenditures (Sum of A, B, and C)				G8*	$

Please continue form on reverse (OVER)

Form MC-10B—Copper, Lead, Zinc, Lode Gold, and Silver Ores—Continued

ITEM 10 PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1954

Report separately each product listed; do not combine product lines. Under "Production," include all products of this establishment which were produced during 1954. Under "Shipments," include all products which were physicially shipped from this establishment during 1954, including material withdrawn from stock piles, and products shipped on consignment, whether or not sold in 1954. Include all concentrates produced, whether from ore mined at your establishment, purchased, received from other plants of your company, or received for milling on a custom or toll basis. Under "Shipments," include transfers to other establishments of your company, reporting their approximate commercial value, not merely the cost of producing them. Include the estimated value of products milled on a custom basis.

Report tonnages in short tons of 2,000 pounds, dry weight. Report total values f. o. b. this mine or mill. Include in the selling value royalty, if any, but exclude transportation charges to the purchaser or user. In the columns "Quantities of metals contained," report the metal content of production where both production and shipments are shown.

Derived Unit Value.—This computation (Col. (e) divided by Col. (d)) is included as an aid to you and the Census Bureau in assuring that this part of your report has been filled out correctly. Please examine the derived unit values to make sure that the correct unit of measure has been used, and that the quantities and values entered are consistent.

As indicated in the headnote to this form, copies of Items 1, 2, 3, 10, 11, and 12 will be made available to the Bureau of Mines for use in its customary manner in lieu of its annual statistical surveys, unless you provide written objection in the "Remarks" section of this form. If you do not object to such use of this material by the Bureau of Mines, do you object to their publishing separately for this establishment the quantity figures in Item 10? ☐ Yes ☐ No

Kind of material (a)	Production (short tons, dry weight) (c)	Shipments and interplant transfers: Quantity (short tons, dry weight) (d)	Shipments and interplant transfers: Value (omit cents) (e)	Quantities of metals contained, based on assay content: Copper (pounds) (f)	Lead (pounds) (g)	Zinc (pounds) (h)	Gold (fine ounces) (i)	Silver (fine ounces) (k)	Other (Kind) / (Unit of measure) (l)	Census product code (j)	Derived unit value (Col. (e) divided by Col. (d))
A. Copper, lead, zinc, gold, and silver bearing materials											
1. Crude ore mined, total										1 01	
a. From underground operations										1 03	
b. From open-pit operations										1 05	
2. Disposition of crude ore and old tailings not milled at this establishment (Report material milled at this establishment in Item 11A1)											
a. Shipped to smelters											
(1) Crude ore			$							2 01	$
(2) Old tailings			$							2 03	$
b. Sold or transferred to other mills for treatment, except shipments for treatment on a custom or toll basis			$							2 05	$
c. Shipped to mills for treatment on a custom or toll basis (In column (e) report estimated mine value before shipment to mill)			$							2 07	$
d. Other shipments, including to ore buyers (Specify) _____			$							2 09	$
3. Concentrates (produced from materials reported in Item 11A)											
a. Copper			$							10213 01	$
b. Lead			$							3 01	$
c. Zinc			$							3 01	$
d. Other (Specify kind and unit of measure if not reported in short tons)											
(1) _____			$							10	$
(2) _____			$							10	$
4. Mill bullion and precipitates recovered by											
a. Amalgamation			$							4 01	
b. Cyanidation			$							4 03	
5. Copper-water precipitates (including precipitates from ore leached in place)			$							10214 01	$

B. All other products											
1. Ores (Specify type) _____			$								$
2. Concentrates											
a. Molybdenum			$							10633 02	$
b. Pyrite			$							14793 33	$
c. Other (Specify kind and unit of measure if not reported in short tons)											
(1) _____			$								$
(2) _____			$								$
3. Other products (Specify kind, such as stone, and unit of measure if not re-reported in short tons)											
a. _____			$								$
b.			$								$
C. Amount received or due for work or services performed for other establishments (such as hauling, stripping, shaft sinking, pumping, and shop work—Exclude amounts received for milling ore on a custom or toll basis)			$							10818 43	
D. **Total** (Sum of A, B, and C)			$							9 99	
E. Amount received for milling ore on a custom or toll basis			$							9 31	

ITEM 11 CRUDE ORE AND OLD TAILINGS MILLED AT THIS ESTABLISHMENT DURING 1954

Item (a)	D1 Code	D2 Quantity (short tons, dry weight) (b)	D3 Value (omit cents) (c)	Quantity of metals contained, based on assay content: D4 Copper (pounds) (d)	D5 Lead (pounds) (e)	D6 Zinc (pounds) (f)	D7 Gold (fine ounces) (g)	D8 Silver (fine ounces) (h)	D9* Other (Type) (Unit of measure) (i)
A. Crude ore and old tailings milled, by ownership of material (In value, include freight to mill)									
1. From this mine or mill									
a. Crude ore	95								
b. Old tailings	96								
2. Crude ore and old tailings received from other mines or mills of this company or purchased from others	97		$						
3. Crude ore and old tailings received for custom or toll milling (Estimate value)	98		$						

B. Crude ore and old tailings received from other establishments for milling, by source. If this report includes a mill serving other mines or mills, list below the names and locations of supplying establishments and the amounts of ore or old tailings received from each. Account for all ore and old tailings reported in 11A2 and 11A3 above. If more space is required, attach a continuation sheet.

Name of supplying mine or mill (a)	State (b)	County (c)	Name and address of operator (d)	Receipts (short tons, dry weight): Crude ore (e)	Old tailings (f)
1.					
2.					
3.					
4.					
5. **Total**					

Please continue form and sign certification on next page

Form MC–10B

FOR CENSUS USE ONLY

Establishment Identification No.

1954 CENSUS OF MINERAL INDUSTRIES
COPPER, LEAD, ZINC, LODE GOLD, AND SILVER ORES—Continued

Name of establishment (Same as Item 1A)

State	SMA / SEA	County	City	City size	T. E.	V. A.	Industry	C/O	T. O.

ITEM 12 NUMBER OF MECHANICAL-POWER LOADING AND EXCAVATING MACHINES, BY TYPE

The figures given in this inquiry should represent equipment **in use or available for use** at the end of 1954. Include emergency or stand-by equipment and equipment temporarily idle because in need of repairs; exclude only junk. The horsepower rating of all equipment reported in this inquiry should be summarized on the appropriate lines of Item 8, column (b).

Type of machine (a)	S1 Code	S2 Total number of machines (b)	Number of machines, by kind of power used: S3 Steam (c)	S4 Electric and Diesel-electric (d)	Internal-combustion engines: S5 Diesel (e)	S6 Gasoline and other (f)	Number of machines, by dipper or bucket capacity in cubic yards: S7 Less than 3 (g)	S8 3–5 inclusive (h)	S9 6–12 inclusive (i)	S10* More than 12 (j)
A. At surface operations										
1. Power shovels	01									
2. Dragline excavators	02									
							Scraper loaders, by rated horsepower: Less than 10	10–25 inclusive	26–100 inclusive	More than 100
3. Scraper loaders	03									
4. Cranes and hoists	05									
5. Other (Specify)	19									
B. In underground operations			Compressed air							
1. Shovel loaders										
a. Requiring a minimum working height of more than 8 feet	21									
b. Requiring a minimum working height of 8 feet or less	22									
2. Scraper loaders (including slushers)	23									
3. Other (Specify)	39									

ITEM 13 Not applicable to these industries.

REMARKS

ITEM 14 CHECKS TO ASSURE A COMPLETE AND ACCURATE REPORT

The Census Bureau reviews your report for omissions, inconsistencies, and unusual ratios. To save you future correspondence about these problems, please make the following checks before returning your report:

(1) Review the report carefully to see that no items are omitted.
(2) Copy the figures requested in Columns I and II below; analyze your results in Column III below.
(3) Correct your report for any errors you find; explain unusual figures in "Remarks" section.

Copy in Column I the figures reported in—	Column I	Copy in Column II the figures reported in—	Column II	Divide Column I by Column II; show result in Column III	Column III
Item 4A, Col. (o) (Production worker wages)	$	Item 5C (Total man-hours)		Average hourly wages per worker	$
Item 5C (Total man-hours)		Item 4A, Col. (n) (Average production workers)		Hours worked per year per worker	
Item 4C, Col. (o) (Total salaries and wages)	$	Item 4C, Col. (n) (Average total employment)		Average annual earnings per employee	$
Item 4C, Col. (o), plus Item 6F plus Item 11A, Col. (c) (Total salaries and wages, cost of supplies, etc., and value of minerals received for preparation)	$	Item 10D plus Item 9D (Value of shipments and capital expenditures)	$	Principal expenses per dollar of shipments and capital expenditures	¢

ITEM 15 CERTIFICATION

Name and address of person who should be contacted if questions arise regarding this report

Telephone No.

This report is substantially accurate and covers the period from _____ to _____

Date _____ Title _____ Signature of authorized person _____

INST.
MC-10B

Department of Commerce
Bureau of the Census

1954 CENSUS OF MINERAL INDUSTRIES

GENERAL INSTRUCTIONS FOR PREPARING REPORTS ON FORMS MC-10B AND MC-10D COPPER, LEAD, ZINC, GOLD, AND SILVER ORES, AND PLATINUM-GROUP METALS

INTRODUCTION

A. WHO SHOULD REPORT?

Every concern which receives a form is required to submit a separate Census report for each mineral establishment in the United States and its Territories of Alaska and Hawaii which it operated during any part of the calendar year 1954, including mines or placer deposits under development and mills under construction. Concerns with more than one establishment must submit a separate report for each. The report should be returned to the office shown on the enclosed envelope within 30 days of its receipt. A copy is also enclosed for your files. If you have not received a sufficient number of forms to cover all of your mines, placer workings, and mills, or your manufacturing or other business establishments, please write to the Bureau of the Census, United States Department of Commerce, Washington 25, D. C., indicating the number of establishments not covered and their type of activity. (Note - If you received a copy of Form NC-X2, use it to request such additional forms.)

The report should be prepared by the operator of the establishment, whether he is its owner, or is operating it under lease or contract.

B. WHAT IS A MINERAL ESTABLISHMENT?

A mineral establishment is generally defined as a single physical location where mineral operations are conducted, for example a mine only, a mine and mill, or a mill only. Where a single physical location comprises two or more units which are engaged in distinct or separate activities, and for which separate records are available or for which substantially accurate reports can be prepared, each such unit should be treated as a separate establishment. In the preparation of such reports a limited amount of prorating or estimating may be necessary. For example, where separate records are not maintained for open pits as distinct from underground mines, it may be necessary in some cases to estimate separate employment and cost of supplies figures.

An establishment is not necessarily identical with the business concern or firm which may consist of one or more establishments. It is also to be distinguished from organizational subunits, departments, or divisions within an establishment.

Thus, for Census purposes, a mine represents a working or group of workings at a given locality in which operations are conducted as a unit or are unified by common management or joint handling of some part of the mining or preparation process. Individual shafts, openings, or sites should not necessarily be considered as individual mines; however, open pit mines should be reported separately from underground mines. Mills engaged solely in preparing minerals mined at other locations should be reported separately.

C. WHAT KIND OF ACTIVITIES SHOULD THE ESTABLISHMENT REPORT COVER?

Form MC-10B should be used for mineral establishments primarily producing copper, lead, zinc, gold, and silver ores from lode deposits; and concentrates produced from such ores. Establishments primarily producing gold, silver, and platinum-group metals from placer deposits should report on Form MC-10D. The recovery of gold and silver through amalgamation or cyanidation from lode ores and the recovery of copper by leaching in place should be included on Form MC-10B.

Each report should cover the operations of a mine or placer working, together with associated shops, yards, mill or washing plant, and offices; or it should cover a preparation plant or mill, not at the site of the mines served, or operated under a separate management from the mines, together with its associated shops and offices. The report should also include such activities as the generation of power for the mine or mill; maintenance of mine, plant, and equipment; and receiving, shipping, storage, research, record keeping, health, safety, cafeteria, and other services, when carried on at the same physical location by the mineral establishment. The report should exclude the operation of company stores, boarding houses, bunk houses, and recreational facilities. The report should also exclude sales branches, power plants, research laboratories, and general administrative offices, if they were operated as separate establishments; such operations should be reported on separate Census forms available for such establishments.

Each report should cover all products of the establishment. If ores or minerals other than your principal product (such as molybdenum,

fluorspar, etc.) were produced at this establishment, they should be reported under Item 10. If, however, your mines were engaged primarily in producing minerals other than those specified on the form, appropriate report forms should be obtained.

The report should not include the recovery of metals by smelting or refining. A separate establishment report for smelting or refining operations should be made on Census of Manufactures forms.

D. WHAT PERIOD SHOULD EACH REPORT COVER?

Each report should cover the calendar year 1954. If your book records are not on a calendar-year basis, carefully prepared estimates for this period will be accepted. If, however, this procedure will cause you considerable additional costs, please write to the Bureau of the Census stating your fiscal-year period and explaining your reporting problems in detail, and we will let you know whether an exception may be made.

The dates given in the certification should show the exact period for which this report is made. Thus, if an establishment began to operate or ceased to operate within the year 1954, the dates given should show that only part of a year is covered by the report. Where an establishment was operated during part of the year under other management, complete the report only for that part of the year 1954 in which you operated the establishment.

E. HOW SHOULD MULTIPLE-ESTABLISHMENT COMPANIES DETERMINE TRANSFER VALUES FOR INDIVIDUAL PRODUCTS AND MATERIALS?

In order to provide adequate information for individual industries, States, and local areas, it is necessary that each reporting unit of a multiple-unit organization report as though it were operated as an independent establishment. For example, where a single company operates a mine and a smelter, the transfer of minerals from the mine to the smelter should be reported at approximately commercial values and not at the cost of production. This requires that the company assign to each operation, and to the individual products, a reasonable proportion of the profits and the overhead costs. The method found by each company to be most convenient will ordinarily be acceptable to the Bureau of the Census. It is recognized that it will sometimes be necessary to make estimates.

Products reported at "transfer values" by the mine should be reported by the receiving establishment as materials used (or inventories of materials, etc.) at the same values, except for the addition of freight or other direct handling charges.

These instructions apply to all establishments for which separate reports are being submitted, including those at the same location, as well as to establishments at different locations.

ITEMS ON THE REPORT FORM

(Note: An entry is required for each item on the form. If the answer is "none," enter "none" or "0." If a particular question does not apply to the establishment reported, enter "not applicable" or explain briefly in the "Remarks" section.)

Item 1.--Name and Location of Establishment.--Enter the name under which the mine or mill covered by this report does business. If it is one of several establishments doing business under the same name, also give the name or number by which it is distinguished from the other establishments of the same company. For example: Jones Copper Company, Mary Jane Mine.

Enter the actual physical location of the mine or mill (which may differ from the address at which mail is received). Enter the official name of the township, election precinct, or similar civil subdivision of the county in which located. Report the section, township, and range if the establishment is located in a county that has been subdivided in this manner. If the establishment is located within the incorporated limits of a municipality that constitutes a separate minor civil division, enter the city name in Item 1B1, as well as in Item 1C. If the name of the civil subdivision is not known, enter in Item 1B1 the name or number of the street, rural route, highway, or stream upon which the establishment is located and its distance and direction from the nearest municipality (for example, "State Highway No. 26, 10 miles northeast of York").

Item 2E.--Change in Status of Operation of this Establishment since December 31, 1953.--The following additional information should be supplied in the "Remarks" section: If establishment did not operate at any time in 1954 (box "4" has been checked) advise date operation is expected to resume. If "Out of business" (box "5" has been checked), state the disposition of the property, such as "mine idle and mill dismantled".

Item 3.--See instructions on report form.

Item 4.--Employment and Payrolls in 1954, by Class of Employee.

Number of Employees in 1954 (Columns (b) through (n); lines A, B, and C).--Report all full-time and part-time employees at this establishment who worked or received pay for any part of the pay period (preferably one week) ended nearest the 15th of the months specified on the report form. Include all persons on paid sick leave, paid holidays, and paid vacation

during these pay periods, and officers, if a corporation. Include persons at a general office serving two or more mines if it is located at or near this establishment. Include employees of miners paid on a per ton, car, or yard basis. (See instructions below for Item 4A.) However, exclude employees who worked at the mine but were on the payroll of another employer (such as employees of contractors). Exclude members of armed forces and pensioners carried on your active rolls. Exclude proprietors or partners, if an unincorporated concern; they should be reported on lines D and E. Exclude workers at smelters and other manufacturing plants, company stores, boarding houses, bunk houses, recreational centers, etc. (You may follow the definition of employees specified by your State Employment Security Agency.)

If manufacturing or distribution activities are also carried on at this location, employees (such as medical staff, yardmen, etc.) who work in units that serve such operations, as well as the mine or mill, should be distributed among the respective establishments. The earnings and man-hours of these employees should be likewise distributed.

Total 1954 Payrolls--(Wages, Salaries, Bonuses, Commissions, and Other Remuneration Paid in Entire Year, before Deductions). (Column (o)).--Report the gross earnings paid in the calendar year 1954 to employees on the payroll of this establishment, including commissions, dismissal pay, all bonuses, vacation and sick-leave pay, and compensation in kind, such as board or housing, and prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Include salaries of officers at this establishment, if a corporation. Exclude payments to proprietor or partners, if an unincorporated concern, and payments to members of armed forces and pensioners carried on your active payroll. Exclude royalty payments to unions. Exclude the cost of smithing, explosives, fuses, electric cap lamps, and mine supplies used in production and development work but charged to employees and deducted from their wages. Report the cost of these and other supplies in Item 6A. (You may follow the definition of salaries and wages that is used for calculating the withholding tax.)

Item 4A.--Production, Development, and Related Employees represent employees up through the working foreman level engaged in manual work, using tools, operating machines, hauling materials, loading and hauling products out of mine in mine cars or trucks, and caring for mines, mills, shops, yards, etc. Include exploration work, mine development, storage, shipping, maintenance, repair, watchmen services, auxiliary production for use at establishment (e.g. power plant), record keeping, and other services closely associated with production and development operations. Include gang and straw bosses and foremen who performed manual labor. Include employees paid on either a time- or piece-rate basis. Include miners who are paid on a per ton, car, yard, or footage basis, and the men engaged by them and paid out of the total amount received by these miners. Include employees at this establishment not on your payroll if paid indirectly through your own employees, such as through superintendents and foremen. Exclude supervisory employees above the working foreman level, sales and administrative personnel, and all other employees defined in Item 4B below. Do not count the same persons under 4A and 4B.

Item 4B.--All Other Employees represent nonproduction personnel above the working foreman level engaged in supervision, sales, highway trucking (by employees not entering mines), clerical, and routine office functions; and executive, purchasing, finance, legal, personnel (including cafeteria, medical, etc.), professional (engineers, geologists, etc.), and technical activities. Include force-account construction workers engaged in construction or major additions or alterations to plant and utilized as a separate work force. Include officers at this establishment, if a corporation, but exclude proprietor or partners, if an unincorporated concern.

Item 5.--Man-hours of Production, Development, and Related Employees, by Department, in 1954.--The man-hour figures are designed to measure over-all activity of the establishment during the year on both active and inactive days. The figures should represent all time worked or paid for, except time for paid vacations, holidays, or sick leave, when the employee was not at the establishment. Include actual overtime hours, not straight-time equivalent hours. If an employee elected to work during the vacation period, report only actual hours worked by such employee.

The figures should account for all man-hours worked at this establishment for the entire year for all full-time and part-time workers reported for the same class of employees in Item 4A. Exclude hours worked by employees of contractors.

A man-hour is the work of one person for one hour. Report figures from actual records of man-hours wherever available. If no records of man-hours were kept, estimate man-hours from payroll or other records.

Item 5A.--Man-hours at Mine.--On the separate line provided for "Underground", include man-hours worked at underground shops. Under "Surface", in Form MC-10B, include man-hours worked at all mine shops that are not located underground; in Form MC-10D, man-hours worked at surface mine shops should be reported separately. Under "Open-pit," on Form MC-10B, include man-hours expended in recovering old tailings from dumps.

Item 6.--Supplies, Fuels, Electric Energy, Contract Work, and Machinery in 1954.--Report total amounts of supplies and fuels actually used during 1954 by the establishment. If your records do not show actual amounts consumed, these may be computed by adding purchases (or

receipts) during the year to opening inventory and subtracting closing inventory. Purchase records instead of consumption records may be used for minor supply items and for any major supply if purchases closely approximate consumption.

Include	Exclude
Items consumed by the establishment during the year although purchased prior to 1954.	Items received during the year which were not consumed.
Physical goods.	Services such as advertising, telephone, telegraph, cable, insurance, and research rendered by other establishments to this establishment, or services of engineering, management, marketing, legal, and other professional consultants, etc. Expenses such as depreciation and depletion charges against plant and equipment, rent and rental allowances, interest payments, royalties, and use of patent fees.
Purchased supplies consumed for production, development, maintenance, and repair of mine, plant, and equipment; and in plant construction.	Supplies (such as timber or lumber), parts, or machinery produced at this establishment.
Supplies which you furnished without charge to contractors or sold to employees for use at this establishment.	Wages of your employees engaged in maintenance and repair work. (This should be reported in Item 4.)
Consumption of items received from other units of your company for which separate reports are being submitted.	Minerals received from other mines for preparation or milling. (These should be reported in Item 11.)

"Cost" refers to direct charges actually paid or payable for items used during the year. For this reason, it should represent the cost after discounts and should include freight charges and other direct charges incurred by the establishment acquiring these supplies.

The costs reported for supplies, fuels, electric energy, and machinery received from other establishments of your company or from a central supplies depot (whether at the same or different physical locations) should approximate the commercial values of these items, plus transportation and other direct handling charges. Wherever possible, these figures should be checked with the values reported by the operation producing and transferring the goods and should exceed the shipment values reported for the producing establishment by the addition of freight or other direct handling charges involved.

Item 6A.--Supplies Used.--The following list of examples of supplies will indicate the types of items which should be included. The list is shown only as an example. It should not be considered a complete list of the items which should be included.

Bearings
Bolts, screws, and nuts
Brake blocks and linings
Carbon and graphite brushes
Cement
Chemical reagents
Dies, jigs, and fixtures
Drill steel and accessories
First aid and safety supplies
Fuses
Gears and pinions
Hand tools
Hardware
Headlights and lamps
Industrial diamonds
Lubricating oils
Lumber
Pipe and fittings
Plates and sheets
Rail and accessories
Rods and bars
Rubber goods (hoses, etc.)
Stationery, stamps, and office supplies
Water and steam purchased
Welding rods, electrodes, and acetylene
Wire, cable, and chain

Item 6A1.--Explosives.--Include only explosive material, such as powder. Exclude detonating equipment. The value of detonating equipment used should be included in Item 6A3, "All other supplies."

Item 6A2.--Steel Mill Shapes and Forms.--Include steel mill shapes and forms, such as plates, sheets, strip, piling, roof bolts, drill steel bars, other bars, rails, wheels, track accessories, pipe, tubing, wire, wire products, and structural shapes.

If records for the tonnage of steel mill shapes and forms used are not available, an estimate is acceptable. For example, this figure may be estimated on the basis of the approximate tonnage of steel used per ton of ore produced.

Item 6A3.--All other supplies.--Include all other supplies used, such as timber and lumber purchased or received from other establishments, forgings and castings, drill bits, other tools or parts, quicksilver, lubricants, water purchased, mill reagents, and other chemicals.

Item 6B.--Purchased Fuels Used.--Report the amount actually paid or payable during 1954 for the specified fuels used for heat, power, or the generation of electricity. Fuels used at this establishment, but produced in another unit of your company, should be reported as fuels in Item 6B, and commercial values assigned to them.

Under "Distillate (light)" fuel oil, include grades Nos. 1 through 4 and P.S. 100 and 200. Under "Residual (heavy)" fuel oil, include grades Nos. 5 and 6 and P.S. 300 and 400. If nearly all of the fuel oil used was of one type, check only the principal type. Exclude any oils used for lubrication. The cost of such oils should be included in Item 6A3, "All other supplies."

Item 6C.--Electric Energy.--Report the quantity and amount actually paid or payable for electric energy purchased during 1954. Report in Item 6C3 the quantity and value of electric energy generated and sold, including transfers to other establishments of your company.

Electric energy for "generating-station use," which should be excluded in Item 6C2, is electric energy used for generating-station lighting, excitors, condenser pumps, boiler feed pumps, stokers, and other station auxiliaries.

Special Instructions for Central Power Plants Serving Two or More Establishments.--If a central power plant is identified as a separate establishment for Census reporting purposes, it should be reported separately on the "Administrative Office and Auxiliary Establishments," Form NC-X6, and on the supplemental power plant form, MC-D10. If such a separate report is made for the power plant, the reports for mineral establishments should show all electric energy used under "Purchased" (including electric energy furnished by the central power plant).

If the central power plant is not reported as a separate unit, all electric energy generated by this power plant should be shown on the report for the establishment to which the power plant is attached, or to which it furnishes the greatest quantity of electric energy. All electric energy generated but not used at this establishment (including transfers to other establishments of the same company) should be reported as electric energy sold. Such electric energy used by other establishments of your company should be shown in their reports as purchased electric energy.

Item 6D.--Contract Work Done for You by Others.--Report the total amounts paid for contract services, including payments for supplies and equipment furnished by the contractor incidental to this work.

Exclude payments to miners paid on a per ton, car, yard, or footage basis. The compensation of such workers should be included in Item 4A.

If part of the payment of a contractor was in material produced, an estimate of the value of the service should be reported.

Item 6E.--Purchased Machinery.--Include all machinery, equipment, parts for renewals and repairs, and used plant which were purchased, or which were received from other establishments of your company. Include equipment which was installed in the mine or mill as well as mobile loading and transportation equipment.

Item 7.--Water Use During 1954.--If you do not have exact records of the amount of water used at this establishment, estimate the amount on the basis of the approximate number of gallons for a typical working day and the number of days which your establishment was operated during 1954.

Include under "Company surface water systems" sources such as streams and lakes; include under "Company ground water systems" sources such as wells and deep springs.

Item 8.--Horsepower Rating of Power Equipment at End of 1954.--Include all engines and turbines, such as steam engines and turbines, internal-combustion engines (Diesel, gas, gasoline, etc.), hydroturbines, water wheels, and other prime movers. Include both owned and rented equipment for use at this establishment. Report internal combustion engines and electric motors (1 hp. and over) in use, or available for use, at the mine or plant, including those driving machinery, such as power shovels, dredging equipment, etc.

In reporting prime movers for electric generators, if the equipment is rated only on the generators, compute the horsepower rating (hp) of the prime mover by multiplying the kilowatt rating (kw) by 1.34. For internal-combustion engines, report the brake horsepower if available.

Item 8A1.--In Highway-type Equipment.--Report on this line only horsepower for equipment that was licensed for highway operation in the sense that you had purchased license plates or tags for the equipment. All non-licensed equipment of similar types should be included in Item 8A2b, "In all other equipment, not driving generators."

Item 9.--Capital Expenditures for This Establishment During 1954 (Exclude expenditures for land and mineral rights.)--These expenditures cover: development and exploration of mineral property, new structures and additions to plant (including major alterations, capitalized repairs, and improvements) whether done on contract or by your own forces; new machinery and new equipment; capitalized repairs and improvements to your existing machinery and equipment; and "used" plant and equipment acquired from others. Such expenditures during 1954 may be determined by the following computation: development work, exploration work, and additions completed during the year plus work-in-progress at the end of the year minus work-in-progress at the beginning of the year. Thus, if such work was either begun prior to 1954 or not completed by the end of 1954, report only that part of the cost (estimated, if necessary) of work that was actually done during 1954. Include labor and other installation costs.

Item 9A1.--Development and Exploration of Mineral Property.--Report development and exploration outlays which were charged to a capital or Defense Minerals Exploration Administration account. These should include charges to fixed assets for which depreciation or depletion accounts are ordinarily maintained for tax purposes. Include expenditures for new entries and shafts and the construction of rail and other roads.

Item 9A2 and 3.--Mill and Other New Construction and Major Alterations.--Include expenditures for new construction, major additions, and alterations (including improvements and capitalized repairs). Include machinery such as cranes which are an integral part of the buildings. Exclude construction of company houses, general recreational facilities, and rail and other roads for these facilities.

Item 9B.--New Machinery and Equipment.--Report total expenditures at this establishment for all new machinery and equipment. Include new machinery and equipment purchased for replacement purposes, as well as for additions to capacity. Include the value of improvements and capitalized repairs to machinery and equipment. Include all new mining, loading, transportation, and other equipment for use at mines; equipment for the mill or washing plant which is not an integral part of the building; as well as new office machines and fixtures, furniture, cafeteria and change-room furnishings, automobiles, trucks, and similar equipment.

Item 9C.--Used Plant and Used Equipment Acquired from Others.--Report total expenditures at this establishment for old or existing plant and for second-hand equipment acquired from others (including the United States Government).

Item 10.--Products and Services of This Establishment.--Products purchased from others for resale without further processing should be excluded.

Bonuses and other credits for metals contained should be included in the value of shipments and interplant transfers. Penalties for impurities, such as arsenic, should be excluded from the value of shipments.

Item 10A1 (Form MC-10B). -Crude Ore Mined.--Exclude tailings.

Item 11.--See instructions on report form.

Item 12.--Number of Mechanical-Power Loading and Excavating Machines.--The sum of the numbers of machines or units classified by kind of power used, columns (c) through (f), should equal the sum of the numbers of machines or units classified by size of dipper or bucket (or of scraper hoists for scraper loaders), columns (g) through (j), and each of these sums should equal the number indicated under "Total number of machines", column (b).

Classify gasoline-electric power shovels or dragline excavators under "Electric and Diesel-electric."

Item 13.-Not applicable to these industries.

INST. MC-10HX

SPECIAL INSTRUCTIONS FOR RESPONDENTS SUBMITTING REPORTS ON URANIUM, VANADIUM, THORIUM, AND LITHIUM

Establishments should not report in Items 10 and 11 information on uranium, vanadium, thorium, and lithium metals, their ores, concentrates, and compounds. The quantity and value of such materials should be excluded from Item 10. Similarly in Item 10, the quantity and value of such ores milled should not be reported.

Establishments must report for their operations all information requested in the enclosed forms, except as stated above.

In sections from which data are omitted enter "Filed in accordance with MC-10HX."

Form approved; Budget Bureau No. 41-54413.

CONFIDENTIAL.—This report should be returned within 30 days of its receipt. This report is required by Act of Congress (13 U. S. C. 131). Your report is confidential and only sworn Census employees will have access to it. It cannot be used for purposes of taxation, investigation, or regulation.

The 1954 Census of Mineral Industries is being conducted by the Bureau of the Census in cooperation with the Bureau of Mines (U. S. Department of the Interior) in order to minimize duplication in canvassing mineral establishments. The Bureau of Mines mineral survey on Form 6-1401-A, Bituminous Coal Production and Mine Operation, will not be conducted for 1954. Unless you make written objection in the "Remarks" section of the present form, a copy of Items 1, 2, 3, 5, 10, 11, and 12 will be made available to the Bureau of Mines for use in its usual manner for annual statistical surveys, including furnishing information to Defense Agencies.

A separate report is required for each underground mine, auger mine, strip mine, or cleaning plant not at the location of the mine served. **Please read enclosed instructions before completing report.**

Form MC- **12A**

U. S. DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

1954 CENSUS OF MINERAL INDUSTRIES

BITUMINOUS COAL AND LIGNITE

(Please correct any errors in name and address)

FOR CENSUS USE ONLY

State	SMA / SEA	County	City	City size	T. E.	V. A.	Industry	C/O	T. O.

ITEM 1 — NAME AND LOCATION OF ESTABLISHMENT COVERED BY THIS REPORT

A. Name of mine (or plant)

B. Location

1. Minor civil division (where applicable, report section, township, and range) | 2. County | 3. State

C. City or village (within which or nearest which located)

ITEM 2 — NAME AND STATUS OF OPERATING COMPANY

A. Name and address

B. Federal Social Security Employer Identification Number

1. Enter number as reported on Form 941, Item 10, on latest employer's quarterly tax return under Federal Insurance Contributions Act _____

2. Number of separate establishments operated under this Employer Identification Number ☐ One ☐ Two or more

C. Form of ownership of operating company (Check one)

☐ Individual proprietor ☐ Partnership ☐ Corporation (Do not include any form of cooperative association) ☐ Cooperative association (corporate or noncorporate) ☐ Other (Specify)

D. Company affiliation

1. Is this company (identified by the number given in Item 2B1) owned or controlled by another company? ☐ Yes ☐ No

2. If "Yes," give name and address of owning or controlling company _____

3. Does this company (identified by the number given in Item 2B1) own or control another company? ☐ Yes ☐ No

E. Change in status of operation of this establishment since December 31, 1953 (Check)

1. ☐ Operated by you during all of 1954
2. ☐ Purchased or leased by you on _____ (date)
3. ☐ Sold or leased to another operator on _____ (date)
4. ☐ Did not operate in 1954
5. ☐ Went out of business (no new operator) on _____ (date)

Give name and address of former owner or lessee (if box "2" is checked) or purchaser or lessee (if box "3" is checked):

NOTE.—A report is required even if establishment operated for part of 1954 only or produced no coal in 1954.

F. Status of establishment if no coal was produced during 1954 (Check one) ☐ Development and exploration work only ☐ Idle ☐ Abandoned ☐ Exhausted

ITEM 3 — NATURE OF OPERATIONS COVERED BY THIS REPORT

A. Nature of activity (Describe briefly the kind of activity of this establishment)

B. Type of mining (Check) ☐ Underground ☐ Auger ☐ Strip

C. Type of mechanical cleaning (Check) ☐ None ☐ Mechanical cleaning at mine ☐ Central cleaning plant

D. Coal seam | Name or number of seam | Average thickness of seam, excluding partings

ITEM 4 — EMPLOYMENT AND PAYROLLS IN 1954, BY CLASS OF EMPLOYEE (Include workers paid on a tonnage basis. Exclude employees of contractors.) (See General Instructions.)

Class of persons (a)	Number of employees in 1954 — Pay period ended nearest 15th of— Jan. (b)	Feb. (c)	Mar. (d)	Apr. (e)	May (f)	June (g)	July (h)	Aug. (i)	Sept. (j)	Oct. (k)	Nov. (l)	Dec. (m)	Average employment (Total of (b) thru (m) ÷ 12) (n)	Total 1954 payrolls (wages, salaries, bonuses, commissions, and other remuneration paid in entire year, before deductions) (omit cents) (o)
A. Production, development, and related employees													A1	A2 $
B. All other employees														$
C. Total, all employees (Sum of A and B)	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	A3	A4 $
D. Proprietors or firm members (not applicable to corporations)													C1	
E. Proprietors or firm members (included in "D") who regularly do production, development, and related work at this establishment													C2	

ITEM 5 — MAN-HOURS AND MAN-SHIFTS OF PRODUCTION, DEVELOPMENT, AND RELATED EMPLOYEES IN 1954, BY DEPARTMENT (Do not include hours for paid vacations, holidays, or sick leave.) (See General Instructions.)

Report all man-hours and man-shifts worked during 1954 by employees in Item 4A above on both active and inactive days, including overtime actually worked. For men on a portal-to-portal basis, include working time, plus travel time, plus lunch time. For column (c) convert parts of days to equivalent full days.

Do you keep actual records (Check)

Of man-hours? ☐ Yes ☐ No

Of man-shifts? ☐ Yes ☐ No

If "Yes" for either man-hours or man-shifts you need not complete column (b). If "No," fill in column (b) and estimate man-hours and man-shifts from payroll or other records.

Department (a)	Code	B2 Average number of employees on active days (total all shifts) (b)	B3 Number of calendar days active during 1954 (c)	B4 Total man-shifts worked during 1954 (d)	B5 Length of shift (hours) (e)	B6* Total man-hours worked during 1954 (f)
A. Underground (mining and development)	11					
B. Auger mining	14					
C. Strip pit						
1. Stripping overburden	16					
2. Mining (See General Instructions)	17					
D. Surface (including tipple, cleaning plant, mine shops, yards, and auxiliary units) (See General Instructions)	33					
E. **Total**, all production, development, and related employees (Sum of A, B, C, and D)	90					A5
F. Man-hours included above which were spent on development and exploration work [1]	51					

[1] Report total man-hours in 1954 devoted to development and exploration work charged to capital or depletion accounts, such as shaft sinking, exploration drilling, and overburden stripping charged to such accounts.

ITEM 6 SUPPLIES, FUELS, ELECTRIC ENERGY, CONTRACT WORK, AND MACHINERY IN 1954

Include all such items charged to both current and capital accounts. (Costs charged to capital accounts should also be included in Item 9.) Report totals for supplies, fuels, and machinery actually used or installed in 1954 whether purchased, withdrawn from inventories, or received from other establishments of this company. Exclude bituminous coal or lignite produced at this establishment, which should be reported in Item 10, A3 and B2. "Cost" refers to amounts actually paid or payable after discounts, and includes freight and other direct charges incurred in acquiring the items. Report the approximate commercial values of items transferred from other establishments of this company. Contract work should represent amounts paid or due contracting concerns for work done during 1954 in the operation or development of this establishment, such as pumping, tunneling, shaft sinking, stripping, boring test holes, shop work, repair work, and construction.

Item (a)	Code (D1)	Unit of measure (b)	Quantity (D2) (c)	Total cost (omit cents) (D3*) (d)
A. Supplies used				
1. Explosives	02	Pound		$
2. Steel mill shapes and forms (See General Instructions)	03	Short ton		$
3. Round and hewn woods products and stumpage	07			$
4. All other supplies (See General Instructions)	08			$
B. Purchased fuels used (Check kinds)				
1. Coal: (11) ☐ Bituminous or lignite (12) ☐ Pennsylvania anthracite		Short ton		$
2. Fuel oil: (31) ☐ Distillate (light) (32) ☐ Residual (heavy)		Bbl. (42 gals)		$
3. Gas: (41) ☐ Natural (42) ☐ Manufactured or mixed		M cu. ft.		$
4. Other fuels: ☐ Gasoline ☐ Liquefied petroleum gas ☐ Wood ☐ Coke ☐ Other	50			$
C. Electric energy (Exclude energy purchased for resale) 1. Purchased	60	kwh (E1,2)		$
2. Generated (gross less generating-station use)		kwh (E3)		
3. Sold (In "Cost" column report value of energy sold)		kwh (E4,5*)		$
D. Contract work done for you by others	70			$
E. Purchased machinery installed (Include all new and used machinery, equipment, parts, and used plant not included above)	80			$
F. **Total** cost of supplies, fuels, purchased electric energy, contract work, and machinery (Sum of A, B, C1, D, and E)	0V			$

ITEM 7 WATER USE DURING 1954

Report the total gallons of water (fresh plus brackish) intake, discharge, and estimated total use, in mine and in cleaning plant, for the entire year 1954. Include water furnished without charge to your contractors for use at this establishment. Estimates are acceptable wherever exact records are not available. If total intake and also total water pumped for drainage was less than 10 million gallons you need complete only sections A and E in this item.

Item (a)		Gallons for the entire year (in millions) (b)
A. Water intake (except mine water)	C3	
B. Water discharged (except mine water)	C4	
C. Mine water 1. Used, such as intake for cleaning plant	C5	
2. Drained and discharged	C6	
D. Was any water recirculated or re-used? (Check one) ☐ Yes ☐ No	C7	
If "Yes," show estimated total amount of water which would have been required if no water had been recirculated or re-used		
E. Principal source of water intake, except mine water (Check appropriate box)	C8*	
(1) ☐ Public water systems (municipally or privately owned) (2) ☐ Company surface water systems (3) ☐ Company ground water systems		

ITEM 8 HORSEPOWER RATING OF POWER EQUIPMENT AT END OF 1954

The figures given should represent total horsepower rating of equipment in use or available for use at the end of 1954. Include emergency or stand-by equipment and equipment temporarily idle because in need of repairs; exclude only junk. Both stationary and mobile equipment should be included. Report horsepower rating indicated on name plates.

Kind of power equipment (a)	Code (F1)	Total horsepower rating of— Loading equipment [1] (F2) (b)	Transportation equipment [2] (F3) (c)	All other [3] (F4*) (d)
A. Internal-combustion engines, steam engines and turbines, and other prime movers				
1. In highway-type equipment	11		hp.	
2. In all other equipment				
a. Driving generators	12	hp.	hp.	hp.
b. Not driving generators	13	hp.	hp.	hp.
B. Electric motors (1 horsepower and over)	14	hp.	hp.	hp.

[1] Include power units for shovels, dragline excavators, mobile loaders, face and room conveyors, etc.
[2] Include power units for locomotives, shuttle cars, "mother" belt conveyors, tractors, trucks, and other haulage units.
[3] Include power units for drills, cutting machines, compressors, machine tools, pumps, hoists, tipple and cleaning plant machinery, etc.

ITEM 9 CAPITAL EXPENDITURES FOR THIS ESTABLISHMENT DURING 1954 (Exclude expenditures for land and mineral rights.)

Expenditures refer to all costs actually incurred during 1954, whether on contract or by your own forces, which are chargeable to the fixed assets accounts of this establishment and which are of the type for which depreciation or depletion accounts are ordinarily maintained. Do not include cost of maintenance and repairs charged as current operating expense.

Item (a)	FOR CENSUS USE ONLY A6, G1	A7, G2	A8	A9*	Expenditures (omit cents) (h)
A. Development and exploration of mineral properties and new construction and major alterations of buildings and other fixed plants and structures					
1. Development and exploration of mineral property				G3	$
2. Cleaning plant construction and major alterations				G4	$
3. Other construction and major alterations				G5	$
B. New machinery and equipment				G6	$
C. Used plant and used equipment acquired from others				G7	$
D. **Total** capital expenditures (Sum of A, B, and C)				G8*	$

(Please continue form on reverse)

(OVER)

Form MC-12A—Bituminous Coal and Lignite—Continued

ITEM 10 PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1954

Report separately each product listed; do not combine product lines. Include all products of this establishment in 1954. Include products shipped on consignment, whether or not sold at the end of 1954. Include products transferred to other establishments of your company (such as to cleaning plants at other locations, coke ovens at this or other locations, other manufacturing establishments, or separate sales branches). "Coal" throughout this inquiry refers to both bituminous coal and lignite. Report all coal in short tons of 2,000 pounds. Report the net total value f. o. b. this establishment, excluding freight or trucking charges on coal shipped to customers. The value of coal not sold should be estimated and included where appropriate in the values reported.

Derived Unit Value.—This computation (Col. (e) divided by Col. (d)) is included as an aid to you and the Census Bureau in assuring that this part of your report has been filled out correctly. Please examine the derived unit values to make sure that the correct unit of measure (Col. (h)) has been used, and that the quantities and values entered are consistant.

Product (a)	Unit of measure (b)	Quantity (d)	Total value f. o. b. this establishment (e)	Census product code (j)	Derived unit value (Col. (e) divided by Col. (d))
A. Raw coal mined for shipment or use without mechanical cleaning (Report only coal mined at this establishment by your employees or for you by outside contractors)					
1. For shipment or use by employees (raw coal)	Short ton		$	12112 06	$
2. For cleaning at other establishments (raw coal)	Short ton		$	12112 05	$
3. For use at this establishment for power or heat (raw coal)	Short ton			12112 08	
B. Coal mechanically cleaned at this establishment (including purchased coal and coal cleaned on a custom basis for others)					
1. For shipment (clean coal)	Short ton		$	12113 03	$
2. For use at this establishment for power or heat (clean coal)	Short ton			12113 08	
C. Other products of this establishment.					
1. Shipments of logs, bolts, piling, hewn cross ties, hewn or round mine timbers and ties, pulpwood, and other woods products					
a. For shipment			$	24110 00	
b. Does this establishment produce round or hewn woods products for its own use? (1) ☐ Yes (2) ☐ No				2411x 00	
2. Rough lumber, including sawed mine timbers and ties					
a. For shipment	Thousand bd. ft.		$	24211 00	$
b. For use at this establishment	Thousand bd. ft.			2421x 00	
3. Shipments of other products, such as clay, stone, and sand (Specify kind and unit of measure)			$		$
D. Amount received or due for work or services performed for other establishments (such as hauling, stripping, pumping, and shop work—exclude amounts received for coal cleaning on a custom basis)			$	12138 43	
E. Total (Sum of A1, A2, B1, C, and D)			$	12119 99	
F. Amount received or due for coal cleaning on a custom basis for others			$	12119 31	
G. Production of coal, by method of shipment (Include all marketable coal; exclude only washery and other refuse. If coal was cleaned, report in terms of cleaned coal.)					
1. Loaded at mine for shipment by rail or water (including coal hauled by truck to railroad siding or waterway)	Short ton			12117 01	
2. Shipped by truck or wagon from mine to final destination (excluding coal used by mine employees)	Short ton			12117 03	
3. Shipped by conveyor belt or tram to final destination	Short ton			12117 05	
4. All other coal (including coal made into beehive coke at mine, taken by locomotive tenders, used at mine for power or heat, and used by mine employees)	Short ton			12117 09	
H. Production of coal, by method of marketing or disposition					
1. Coal sold in open market	Short ton		$	12117 11	$
2. Coal not sold in open market (estimate value)	Short ton		$	12117 15	$
3. Total coal available for use in 1954 (Sum of H1 and H2; should equal sum of G1, G2, G3, and G4 above)	Short ton		$	12117 99	$

I. Transportation routes. (The sum of tonnages 1 and 2 below should be the same as the tonnage in G1 above.)

1. Railroads and waterways only (Report all coal loaded from tipple directly into railroad cars or river barges.)

Name of railroad or waterway on which coal was first loaded (a)	Short tons loaded on each (b)	Name of railroad or waterway on which coal was first loaded (a)	Short tons loaded on each (b)

2. Trucked to railroads or waterways (For mines with no rail or river tipple, report coal hauled by truck to railroad siding or to river for shipment.)

Name of railroad or waterway to which hauled for shipment (a)	Short tons loaded on each (b)	Shipping or loading point (c)	Miles hauled (d)

J. Coal produced, by methods of mining	JB	Short tons (exclude refuse)
1. Underground operations	J1	
a. Cut by machines	J2	
b. Mined by continuous mining machines	J3	
c. Shot from solid and cut by hand	J4	
2. Strip-pit operations	J5	
a. Mined by your company	J6	
b. Mined by outside contractor	J7	
3. Auger-mine operations	J8*	
a. Mined by your company		
b. Mined by outside contractor		
4. **Total** all methods		

K. Overburden excavated at strip pits
1. Quantity _____ (Cubic yards)
2. Average thickness _____ (Feet)

L. Number of cutting machines underground

M. Power drilling of shot holes, by kind of power used	Electric	Air
1. Underground		
a. Total number of drills		
b. Short tons power-drilled (clean coal equivalent)		
2. Surface—number of drills used in bank or overburden		
a. Horizontal		
b. Vertical		

N. Number of haulage units
1. Underground

Number of locomotives			Number of shuttle and surge cars		Number of rope hoists [1]		"Mother" belt conveyor [2] (used in transportation)		Number of animals
Electric		All other (Specify: steam, Diesel, gasoline, etc.)	Cable-reel	Battery	Portable	Stationary	Number	Average length	
Trolley (a)	Battery (b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)

[1] Scraper hoists should be omitted here and reported under Item 12B3. Also exclude shaft and main slope hoists and hoists for car shifting at conveyor heads or slope conveyor.
[2] Include gathering and main haulage belt conveyors with capacity to handle over 500 feet of conveyor. Omit main slope and face or room conveyors.

Item (a)	Number (b)	Average capacity per unit (short tons) (c)
2. At strip pit and auger mine (hauling from pit or mine to tipple or ramp)		
a. Trucks and tractor trailers		
b. Other (Specify) _____		

c. Average distance coal was hauled from pit or mine to tipple or ramp _____ (Miles)

ITEM 11 COAL PREPARATION AT THIS ESTABLISHMENT IN 1954

A. Coal cleaned at this establishment, by ownership of material (In value, include freight to cleaning plant)

Item (a)	D1 Code	D2 Short tons (b)	D3* Value (omit cents) (c)
1. Raw coal from this mine or strip pit	95		
2. Raw coal received from other mines or strip pits of this company or purchased from others	97		$
3. Raw coal received for custom cleaning (estimate value)	98		$
4. **Total** raw coal cleaned at this plant	9V		

B. Raw coal received from other mines or strip pits, by source. If this report is for a central cleaning plant or includes a plant cleaning coal from mines other than the one covered by this report, list below the names and locations of supplying mines, name of mine operator, and tonnage of raw coal received from each.

Name of supplying mine or strip pit (a)	State (b)	County (c)	Name of operator (d)	Raw coal received (short tons) (e)
1.				
2.				
3.				
4. **Total** (Should equal A2 and A3 above)				

Please continue form and sign certification on next page

Form MC-12A

1954 CENSUS OF MINERAL INDUSTRIES

BITUMINOUS COAL AND LIGNITE—Continued

FOR CENSUS USE ONLY

Establishment Identification No.

Name of establishment (Same as Item 1)

State	SMA / SEA	County	City	City size	T. E.	V. A.	Industry	C/O	T. O.

ITEM 11

COAL PREPARATION AT THIS ESTABLISHMENT IN 1954 (continued)

C. Coal preparation

1. Mechanical cleaning (Exclude hand picking and mechanical slate pickers)

Item (a)	Wet-washing methods: Principal method (b)	Wet-washing methods: Other methods (c)	Pneumatic methods (d)
a. Type of cleaning equipment			
b. Sizes mechanically cleaned			
c. Raw coal cleaned—short tons (Sum of Cols. (b), (c), and (d) should equal A4 above)			
d. Cleaned product obtained—short tons			
e. Amount of refuse—short tons (c minus d)			

f. Cleaning plant at which coal from this mine was cleaned

Name	Location

	Primary	Secondary
2. Mechanical crushing of coal—approximate short tons crushed		

3. Treatment of coal for allaying dust (Tipple treatment of coal for shipment)

Sizes treated (a)	Treatment material (calcium chloride, oil, wax, or other) (b)	Approximate short tons treated (c)
a.		
b.		

ITEM 12

NUMBER OF MECHANICAL-POWER LOADING AND EARTH MOVING MACHINES, BY TYPE

The figures given in this inquiry should represent equipment in use or available for use at the end of 1954. Include emergency or stand-by equipment and equipment temporarily idle because in need of repairs; exclude only junk. The horsepower rating of all equipment reported in this inquiry should be summarized on the appropriate lines of Item 8, Col. (b).

Type of equipment or loading (a)	Code	S1 Total number of machines (b)	Number of machines, by kind of power used: S3 Steam (c)	S4 Electric and Diesel-electric (d)	Internal-combustion engines: S5 Diesel (e)	S6 Gasoline and other (f)	Number of machines by dipper or bucket capacity in cubic yards: S7 Less than 3 (g)	S8 3–5 inclusive (h)	S9 6–12 inclusive (i)	S10 More than 12 (j)	S11* Short tons of coal loaded in 1954 (exclude refuse) (k)
A. Strip- and auger-mine equipment											
1. Power shovels	01										
2. Dragline excavators	02										
3. Carryall scrapers	15										
4. Bulldozers	12										
5. Coal recovery augers	14										
6. Other types (Specify)	19										

			Compressed air				Scraper loaders, by rated horsepower				
							Less than 10	10–25 inclusive	26–100 inclusive	More than 100	
B. Underground											
1. Continuous mining machines	32										
2. Mobile loaders, loading											
a. Direct into mine cars	25										
b. On to conveyors	26										
c. Into shuttle cars	27										
d. In conjunction with continuous mining machines	28										
3. Scraper loaders	23										
4. Duckbills and self-loading conveyors	30										
5. Hand-loaded face or room conveyors [1]	31										
6. Other underground loaders (Specify) _____	39										
7. Total coal mechanically loaded underground	2V										
8. Hand-loaded into mine cars	40										

[1] Count each conveyor advancing a room face or entry face, or working on a pillar, as a machine or unit. Do not include conveyors which perform only a transportation function ("mother" conveyors, etc.)

ITEM 13 Not applicable to this industry

REMARKS

ITEM 14 CHECKS TO ASSURE A COMPLETE AND ACCURATE REPORT

The Census Bureau reviews your report for omissions, inconsistencies, and unusual ratios. To save you future correspondence about these problems, please make the following checks **before** returning your report:

(1) Review the report carefully to see that no items are omitted.
(2) Copy the figures requested in Columns I and II below; analyze your results in Column III below.
(3) Correct your report for any errors you find; explain unusual figures in "Remarks" secti

Copy in Column I the figures reported in—	Column I	Copy in Column II the figures reported in—	Column II	Divide Column I by Column II; show result in Column III	Column III
Item 4A, Col. (o) (Production worker wages)	$	Item 5E, Col. (f) (Total man-hours)		Average hourly wages per worker	$
Item 5E, Col. (f) (Total man-hours)		Item 4A, Col. (n) (Average production workers)		Hours worked per year per worker	
Item 4C, Col. (o) (Total salaries and wages)	$	Item 4C, Col. (n) (Average total employment)		Average annual earnings per employee	$
Item 4C, Col. (o), plus Item 6F plus Item 11A, Col. (c) (Total salaries and wages, cost of supplies, etc., and value of coal received for preparation)	$	Item 10E plus Item 9D (Value of shipments and capital expenditures)	$	Principal expenses per dollar of shipments and capital expenditures	¢

ITEM 15 Name and address of person who should be contacted if questions arise regarding this report — Telephone No.

CERTIFICATION This report is substantially accurate and covers the period from _____ to _____

Date _____ Title _____ Signature of authorized person _____

Form approved; Budget Bureau No. 41-54415.

CONFIDENTIAL.—This report should be returned within 30 days of its receipt. This report is required by Act of Congress (13 U. S. C. 131). Your report is confidential and only sworn Census employees will have access to it. It cannot be used for purposes of taxation, investigation, or regulation.

This survey has been developed by the Bureau of the Census with the cooperation of the Bureau of Mines (U. S. Department of the Interior).

A separate report is required for each State (including offshore operations) in which you operated or drilled oil or gas wells, or performed exploration work for oil or gas. The report should be on a gross basis for all leases operated by you, but should exclude your interests in leases operated by others. Do not include in this report the operation of natural-gasoline plants or petroleum refineries. **Please read enclosed instructions before completing report.**

Form MC– **13A**

U. S. DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

1954 CENSUS OF MINERAL INDUSTRIES

CRUDE PETROLEUM AND NATURAL GAS

(Please correct any errors in name and address)

FOR CENSUS USE ONLY

State	SMA SEA	County	City	City size	T. E.	V. A.	Industry	C/O	T. O.

ITEM 1 LOCATION

State in which properties covered by this report are located

ITEM 2 NAME AND STATUS OF OPERATING COMPANY

A. Name and address

B. Federal Social Security Employer Identification Number

1. Enter number as reported on Form 941, Item 10, on latest employer's quarterly tax return under Federal Insurance Contributions Act_____

2. Number of separate establishments operated under this Employer Identification Number ☐ One ☐ Two or more

C. Form of ownership of operating company (Check one)

☐ Individual proprietor ☐ Partnership ☐ Corporation (Do not include any form of cooperative association) ☐ Cooperative association (corporate or noncorporate) ☐ Other (Specify)

D. Company affiliation

1. Is this company (identified by the number given in Item 2B1) owned or controlled by another company? ☐ Yes ☐ No

2. If "Yes," give name and address of owning or controlling company _____

3. Does this company (identified by the number given in Item 2B1) own or control another company? ☐ Yes ☐ No

E. Change in status of these properties since December 31, 1953 (Check)

1. ☐ Operated by you during all of 1954.
2. ☐ All properties purchased or leased by you on _____ (date)
3. ☐ All properties sold or leased by another operator on _____ (date)
4. ☐ Did not operate in 1954.
5. ☐ Operator went out of business (no new operator) on _____ (date)

Give name and address of former owner or lessee (if box "2" is checked) or purchaser or lessee (if box "3" is checked)

Note: A report is required even if no oil or gas was produced in 1954, or if your company operated for part of 1954 only.

F. Status of properties if no oil or gas was produced during 1954 (Check one) ☐ Drilling only ☐ Exploration work only ☐ Abandoned

ITEM 3 NATURE OF OPERATIONS COVERED BY THIS REPORT

A. Nature of activity (Describe briefly the kind of activity of this establishment)

B. Was this company engaged in any offshore oil or gas operations in territories contiguous to the State designated in Item 1? (Check one) ☐ Yes ☐ No

C. Number of oil wells and gas wells (including condensate wells) operated by you in the State (or contiguous offshore territories) designated in Item 1. If a well produced both oil and gas, classify it according to its more valuable total product; do not report it as both an oil and gas well. On lines 1 and 2 include only wells operated by you on December 31, 1953, including wells shut-in for part of December. Service wells (gas injection, water injection, brine disposal, underground storage, etc.) should be reported on lines 3c, 3d, and 12 only.

Item (a)	HA H1 Code	Number of wells H2 Total (b)	H3 Oil (c)	H4* Gas (d)
1. Producing during December 1953	101			
2. Shut-in or idle during all of December 1953	102			
3. Drilled and completed in 1954—				
a. Producing wells	103			
b. Dry holes	104			
c. Service wells	105			
d. Wells recompleted in 1954	106			
4. Purchased (or leased) in 1954	107			
5. **Total** (Sum of 1, 2, 3a, and 4)	10V			
6. Wells in process of drilling (on contract or by own company), December 31, 1953	110			
7. Producing during December 1954	121			
8. Shut-in or idle during all of December 1954	122			
9. Abandoned in 1954 (exclude dry holes)	123			
10. Sold (or leased) in 1954	124			
11. **Total** (Sum of 7, 8, 9, and 10); should be the same as line 5 of this item)	12V			
12. Wells being used for service, December 31, 1954	130			
13. Wells in process of drilling (on contract or by own company), December 31, 1954	131			
14. Wells included in lines 3 and 7 which were operated under Federal leasehold (exclude submerged offshore lands)				
a. Drilled and completed in 1954	132			
b. Producing during December 1954	133			

ITEM 4 EMPLOYMENT AND PAYROLLS IN 1954, BY CLASS OF EMPLOYEE (Include both part-time and full-time workers. Exclude employees of contractors.) (See General Instructions.)

Class of persons (a)	Number of employees in 1954 — Pay period ended nearest 15th of— Mar. (b)	May (c)	Aug. (d)	Nov. (e)	Average employment (lines A, B, and C, total of (b) through (e) ÷ (4)) (f)	Total 1954 Payroll (wages, salaries, bonuses, commissions, and other remuneration paid in entire year, before deductions) (omit cents) (g)
A. Production, development, and related employees					A1	A2 $
B. All other employees						$
C. **Total**, all employees (Sum of A and B)	L3X	L5X	L8X	L11X	A3	A4 $
D. Proprietors or firm members (not applicable to corporations)					L13* 4 C1	
E. Proprietors or firm members (included in "D" above) regularly performing production, development, and related work on these properties					C2*	

ITEM 5 — MAN-HOURS OF PRODUCTION, DEVELOPMENT, AND RELATED EMPLOYEES IN 1954, BY DEPARTMENT

Do not include hours for paid vacations, holidays, or sick leave; or hours worked by employees of contractors. Estimates are acceptable where exact records are not available.

Department (a)	B1X Code	B6* Total man-hours worked during 1954 (b)
A. Operating and maintaining wells	22	
B. Drilling wells and rig building	52	
C. Exploration work (except drilling)	53	
D. Other work (Specify)	80	
E. **Total**, all production, development, and related workers (Sum of A, B, C, and D)	90	A5

ITEM 6 — SUPPLIES, FUELS, ELECTRIC ENERGY, CONTRACT WORK, AND MACHINERY IN 1954

Include all such items charged to **both current and capital accounts.** (Costs charged to capital accounts should also be included in Item 9.) Report totals for supplies, fuels, and machinery actually used or installed in 1954, whether purchased, withdrawn from inventories, or received from other establishments of this company. "Cost" refers to amounts actually paid or payable after discounts, and includes freight and other direct charges incurred in acquiring the items. Report approximate commercial values for items transferred from other establishments of this company. "Contract work" represents amounts paid or due contracting concerns for the operation or development of these properties.

Item (a)	D1 Code	Unit of measure (b)	D2 Quantity (c)	D3* Total cost (omit cents) (d)
A. Purchased supplies used. 1. Gas for gas lift and repressuring	09	MCF		$
2. All other supplies used (such as drill bits and reamers, drilling fluid materials, cement, lumber, pipe, parts for renewals and repairs, lubricants, and water purchased)	04			$
B. Purchased fuels used. (Check kinds of fuels used. Exclude oil and gas produced on these properties, which should be included in Item 10, A2 and B4d (1).)				
1. Coal: (11) ☐ Bituminous or lignite (12) ☐ Pennsylvania anthracite		Short ton		$
2. Fuel oil: (31) ☐ Distillate (light) (32) ☐ Residual (heavy)		Bbl. (42 gals.)		$
3. Gas: (41) ☐ Natural (42) ☐ Manufactured or mixed		MCF		$
4. Other fuels: ☐ Gasoline ☐ Liquefied petroleum gas ☐ Wood ☐ Coke ☐ Other	50			$
C. Electric energy (exclude energy purchased for resale) 1. Purchased	60	kwh E1.2		$
2. Generated (gross less generating-station use)		kwh E3		
3. Sold (in "Cost" col. report value of energy sold)		kwh E4.5*		$
D. Contract work done for you by others (such as drilling and completing wells, rig building, cementing, logging and surveying, acidizing, chemical treatment, shooting, bailing and cleaning out, pulling tubing, plugging, hauling, repair work, and construction)	70			$
E. Purchased machinery (Report all new and used machinery, equipment, parts, and used plant, not included above)	80			$
F. **Total** cost of supplies, fuels, purchased electric energy, contract work, and machinery (Sum of A, B, C1, D, and E)	0V			$

ITEM 7 — WATER USE DURING 1954.

Report water intake and discharge for **entire year 1954. Include** water used that was produced with oil, and water furnished without charge to your contractors for use on these properties. **Estimates are acceptable wherever exact records are not available.** If total intake was less than 10 million gallons in 1954, complete only section A, col. (h), and section C.

Item (a)	HB H1 Code 299	Gallons for the entire year (in millions) Total (b)	Water used for flooding included in "Total" (c)
A. Water intake 1. Fresh water	H2		H3
2. Brackish (salt) water	H4		H5
B. Water discharged 1. Fresh water	H6		
2. Brackish (salt) water	H7		H8*

C. Principal source of fresh water intake (Check appropriate box)

(1) ☐ Public water systems (municipally or privately owned)

(2) ☐ Company surface water systems, such as streams or lakes

(3) ☐ Company ground water systems, such as wells or deep springs

ITEM 8 — HORSEPOWER RATING OF POWER EQUIPMENT AT END OF 1954

The figures given should represent **total** horsepower rating of equipment **in use or available for use at the end of 1954.** Both stationary and mobile equipment should be included. Report horsepower rating indicated on name plates.

Kind of power equipment (a)	F1X Code	F5* Total horsepower rating (at end of year) (h)
A. Internal-combustion engines, steam engines and turbines, and other prime movers		
1. In highway-type equipment	11	hp.
2. In all other equipment a. Driving electric generators	12	hp.
b. Not driving electric generators	13	hp.
B. Electric motors (1 horsepower and over)	14	hp.

ITEM 9 — CAPITAL EXPENDITURES FOR THESE PROPERTIES DURING 1954 (Exclude expenditures for land and mineral rights)

Expenditures refer to all costs actually incurred during 1954, whether on contract or by your own forces, which are **chargeable to the fixed assets accounts** of this establishment and which are of the type for which depreciation or depletion accounts are ordinarily maintained. Do not include cost of maintenance and repairs charged as current operating expense.

Item (a)	FOR CENSUS USE ONLY A6, G1	A7, G2	A8	A9*	Expenditures (omit cents) (b)
A. Development of mineral properties and new construction and major alterations of buildings and other fixed plants and structures					
1. Development of mineral property				G3X	$
2. Other construction and major alterations				G5	$
B. New machinery and equipment				G6	$
C. Used plant and used equipment acquired from other owners				G7	$
D. **Total** capital expenditures (Sum of A, B, and C)				G8*	$

Please continue form and sign certification on next page

(OVER)

Form MC-13A—Crude Petroleum and Natural Gas

ITEM 10 PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1954

Report separately each product listed; do not combine product lines. Include all products of this establishment which were produced or shipped during 1954. Include products shipped on consignment, whether or not sold at the end of 1954. Include products transferred to other establishments of your company (such as to your natural-gasoline plants, petroleum refineries, other manufacturing establishments, or separate sales branches).

Report the entire output of wells operated by you and reported in Item 3, including royalty interests and subsidy payments.

Derived Unit Value.—This computation (Col. (e) divided by Col. (d)) is included as an aid to you and the Census Bureau in assuring that this part of your report has been filled out correctly. Please examine the derived unit values to make sure that the correct unit of measure (Col. (b)) has been used, and that the quantities and values entered are consistent.

Product or work done (a) [K]	Unit of measure (b)	Quantity (d)	Total value at wells (omit cents) (e)	Census product code (j)	Derived unit value (Col. (e) divided by Col. (d))
A. Crude petroleum (report volumes corrected to 60° F.)					
1. Shipped	Barrel		$	13122 02	$
2. Used in lease operations (Check) ☐ For power or heat; ☐ For other purposes, including losses	Barrel			13122 0	
B. Natural gas (adjust all volumes to a pressure base of 14.73 pounds absolute at 60° F.)					
1. Gross production					
a. Gas from oil wells (casinghead)	MCF			13131 12	
b. Gas from gas wells (including condensate wells)	MCF			13131 13	
c. Gross production (Sum of a and b)	MCF			13131 01	
2. Withdrawn from underground storage	MCF			13131 61	
3. Purchased (including natural gas reported under Items 6A1 and 6B3)	MCF			13131 62	
4. Disposition (including residue gas and gas withdrawn from storage)					
a. Deliveries to natural-gasoline plants	MCF			13132 02	
b. Residue returned from natural-gasoline plants	MCF			13132 03	
c. Net deliveries to natural-gasoline plants (a minus b). In value include, besides the value of the residue gas, the producer's realization from all products contained in the gas delivered to natural-gasoline plants	MCF		$	13132 04	$
d. Used in lease operations (including natural gas reported under Items 6A1 and 6B3)					
(1) For power or heat	MCF			13132 08	
(2) For gas lift (net)	MCF			13132 09	
e. Returned to underground formations					
(1) For repressuring, pressure maintenance, and cycling	MCF			13132 11	
(2) For underground storage	MCF			13132 12	
f. Other deliveries					
(1) To distributors and transmission companies	MCF		$	13132 21	$
(2) To consumers					
(a) Domestic	MCF		$	13132 31	$
(b) Commercial (hotels, stores, theatres, etc.)	MCF		$	13132 32	$
(c) Industrial (including deliveries to own refineries)	MCF		$	13132 33	$
g. Vented to air, burned in flares, and other losses	MCF			13132 41	
h. Gross disposition (Sum of c, d, e, f, and g; this total should equal sum of 1c, 2, and 3 above)	MCF			13132 01	
C. Field condensate and drips shipped	Barrel		$	13121 61	$
D. Other products shipped (Specify kind and unit of measure)					
1.			$		$
2.			$		$
E. Amount received or due for work or services performed for other establishments during 1954, such as drilling, hauling, pumping, etc. (Specify kind of work)					
1.			$		
2.			$		
3.			$		
F. Total value (Sum of A1 through E)			$	131 9 99	

ITEM 11 COUNTY DATA

List below the counties in the State covered by this report in which you operated oil- or gas-field properties during 1954. Total figure in Col. (b) should equal figure in Item 10A1, Col. (d). Total figure in Col. (c) should equal figure in Item 4C, Col. (b).

County (or parish) and offshore location (a)	HC H1 Code	H2 Crude petroleum shipped in 1954 (bbls.) (b)	H3* Number of employees in pay period ended nearest March 15, 1954 (c)
	3		
	3		
	3		
	3		
Offshore locations	3		
Total, all counties (or parishes) and offshore locations	3		

ITEM 12 COST OF DRILLING AND EQUIPPING WELLS COMPLETED IN 1954

Report here the designated costs of drilling and equipping all wells reported under Item 3C3, including the cost of dry holes and service wells drilled during 1954. Report only the costs specified; do not include other costs such as taxes, interest on investments, etc.

Kind of wells drilled (a)	W / Code	Wells completed during 1954: Number of wells (b)	Wells completed during 1954: Total footage drilled (c)	Cost of drilling and equipping wells, excluding amounts paid to contractors (omit cents): Cost of drilling [1] (d)	Cost of well equipment [2]: Casing (e)	Cost of well equipment [2]: Equipment for flowing or pumping and production derrick [3] (f)	Total of preceding drilling and equipment cost items (g)	Total amounts paid or due contractors for drilling or equipping wells (omit cents) (h)
A. Drilled by own company								
1. Oil wells	101			$	$	$	$	$
2. Gas wells	102			$	$	$	$	$
3. Dry holes [4]	103			$	$	$	$	$
4. Service wells [5]	104			$	$	$	$	$
B. Drilled on contract for you by others								
1. Oil wells	105			$	$	$	$	$
2. Gas wells	106			$	$	$	$	$
3. Dry holes [4]	107			$	$	$	$	$
4. Service wells [5]	108			$	$	$	$	$
C. **Total** (Sum of A and B)	10V			$	$	$	$	$
D. Wells recompleted	111			$	$	$	$	$
E. Wells included in C above drilled by								
1. Rotary tools	112							
2. Cable tools	113							

[1] Report cost of labor, supplies, water, fuel, and power used in such operations as erecting and dismantling drilling rig and derrick, drilling hole, running and cementing casing, and hauling materials; include machinery and tool charges or rentals, deduct the value of material salvaged after use. Do not include here cost of drilling derrick that was left over well for production after well completion.

[2] Include cost of delivering and installing equipment, but do not duplicate costs reported under "Cost of drilling." Deduct value of your equipment that was salvaged and was used again, but include cost of salvaging.

[3] Include tubing, wellhead fittings, gas traps, flow tanks, etc., and drilling derrick retained over well after completion, or special-production derrick.

[4] Include wells drilled and abandoned without commercial production during 1954.

[5] Include gas-injection, water-injection, brine-disposal, and underground-storage wells.

ITEM 13 Not applicable for these operations

REMARKS

ITEM 14 CHECKS TO ASSURE A COMPLETE AND ACCURATE REPORT

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(1) Review the report carefully to see that no items are omitted.
(2) Copy the figures requested in Columns I and II below; analyze your results in Column III below.
(3) Correct your report for any errors you find; explain unusual figures in "Remarks" section.

Copy in Column I the figures reported in—	Column I	Copy in Column II the figures reported in—	Column II	Divide Column I by Column II; show result in Column III	Column III
Item 4A, Col. (g) (Production worker wages)	$	Item 5E, Total (Total man-hours)		Average hourly wages per worker	$
Item 5E, Total (Total man-hours)		Item 4A, Col. (f) (Average production workers)		Hours worked per year per worker	
Item 4C, Col. (g) (Total salaries and wages)	$	Item 4C, Col. (f) (Average total employment)		Average annual earnings per employee	$
Item 4C, Col. (g), plus Item 6F (Total salaries and wages, and cost of supplies, etc.)	$	Item 10F plus Item 9D (Value of shipments and capital expenditures)	$	Principal expenses per dollar of shipments and capital expenditures	¢

ITEM 15

Name and address of person who should be contacted if questions arise regarding this report — Telephone No.

CERTIFICATION

This report is substantially accurate and covers the period from _____ to _____

Date _____ Title _____ Signature of authorized person _____

INST.
MC-13A

Department of Commerce
Bureau of the Census

1954 CENSUS OF MINERAL INDUSTRIES

GENERAL INSTRUCTIONS FOR PREPARING REPORTS ON FORMS MC-13A AND MC-13X

MC-13A—CRUDE PETROLEUM AND NATURAL GAS

AND

MC-13X—OFFSHORE OIL AND GAS OPERATIONS

INTRODUCTION

A. WHO SHOULD REPORT?

Every concern which receives Form MC-13A is required to submit a separate Census report for each State, Alaska, and Hawaii in which it operated oil or gas wells, or drilled oil or gas wells for its own account, during any part of the calendar year 1954. Offshore operations in the contiguous territories should be included. The report should be returned to the office shown on the enclosed envelope within 30 days of its receipt. A copy is also enclosed for your files. If you have not received a sufficient number of forms to cover all the States in which you operated or drilled wells, or to cover your other mineral, manufacturing, wholesale, or retail trade operations, please write to the Bureau of the Census, United States Department of Commerce, Washington 25, D. C., indicating the number of establishments not covered and their type of activity. (Note--If you received a copy of Form NC-X2, use it to request such additional forms.)

The report should be prepared by the operator of the oil- or gas-field properties, whether he is the owner or is operating these properties under lease or contract. The report should be made on a gross basis for these properties and should not include data for properties in which the company only owns an interest but which were operated by others. Wells operated on contract should be reported on this form by the contractor.

In general, separate reports should be prepared for the operations of parent companies and their subsidiaries.

B. WHAT IS A MINERAL ESTABLISHMENT?

An oil- or gas-field mineral establishment is defined, for Census purposes, as representing all oil- and gas-field properties in one State operated by the reporting company. It does not include natural-gasoline or cycle-condensate plants, petroleum refineries, bulk tank stations, or filling stations. In order to segregate such operations a limited amount of prorating or estimating may be necessary. An establishment is not necessarily identical with the business concern or firm which may consist of one or more establishments. It is also to be distinguished from organizational subunits, departments, or divisions within an establishment.

C. WHAT KIND OF ACTIVITIES SHOULD THIS REPORT COVER?

Form MC-13A should be used only by concerns who operated wells or performed other oil- or gas-field work for their own account. Include in the report exploration for oil and gas, drilling and operation of wells, repressuring oil fields, separating and emulsion breaking at field tanks, the operation of field dehydration and pressure maintenance plants, gathering lines, and field storage facilities. Do not include the operation of natural-gasoline or cycle-condensate plants, which should be reported on Form MC-13B, or the operation of petroleum refineries which should be reported on Form MC-29A. If you were primarily engaged in performing oil- or gas-field contract work for others (except operation of wells), you should report on Form MC-13C. If your concern is engaged in other mining activities, such as mining clay, appropriate report forms should be obtained.

The report should also include activities such as the generation of power for oil- and gas-field use; maintenance of equipment; receiving, shipping, storage, research, record keeping, health, safety, food service and other services, when carried on primarily for oil- and gas-field operations. The report should exclude sales branches, power plants, research laboratories, and general administrative offices, if they are operated as separate establishments. Also exclude company stores, boarding houses, bunk houses, and recreational facilities. Such operations should be reported on separate Census forms available for such establishments.

Offshore Operations.--The report should include throughout data for offshore exploration, drilling, and production operations in territories contiguous to the State covered by the report, including areas under the jurisdiction of either the State or the Federal Government. However, a separate report is also required on Form MC-13X to provide data on the production from offshore wells and on the cost of drilling and equipping such wells. For reporting purposes, an offshore well is one which is bottomed at, or produces from, a point which lies seaward from the normal or ordinary continental coast line. The term does not apply to wells drilled to and producing from points underlying inland waters.

D. WHAT PERIOD SHOULD EACH REPORT COVER?

Each report should cover the calendar year 1954. If your book records are not on a calendar-year basis, carefully prepared estimates for this period will be accepted. If, however, this procedure will cause you considerable additional costs, please write to the Bureau of the Census stating your fiscal-year period and explaining your reporting problems in detail, and we will let you know whether an exception may be made.

The dates given in the certification should show the exact period for which this report is made. Thus, if your company began to operate or ceased to operate these properties within the year 1954, the dates given should show that only part of a year is covered by the report. Where properties were operated during part of the year under other management, complete the report only for that part of the year 1954 in which you operated the establishment.

E. HOW SHOULD MULTIPLE-ESTABLISHMENT COMPANIES DETERMINE TRANSFER VALUES FOR INDIVIDUAL PRODUCTS AND MATERIALS?

In order to provide adequate information for individual industries, States, and local areas, it is necessary that each reporting unit of a multiple-unit organization report as though it were operated as an independent establishment. For example, where a single company has oil- and gas-field operations, and also natural-gasoline plants or petroleum refineries, the transfer of oil or gas from one operation to the other should be reported at approximately commercial value and not at the cost of production. This requires that a company operating in two or more industries assign to each operation and to the individual products a reasonable proportion of the profits and the overhead costs. The method found by each company to be most convenient will ordinarily be acceptable to the Bureau of the Census. It is recognized that it will sometimes be necessary to make estimates.

Products reported at "transfer values" for the producing operation should be reported by the receiving plant as materials or fuels purchased or used at the same values, except for the addition of transportation or other direct handling charges.

These instructions apply to all establishments for which separate reports are being submitted, such as natural-gasoline plants, petroleum refineries, bulk tank stations, and filling stations located in the oil- or gas-fields. For example, it may be necessary, in some cases, to estimate separate employment figures when the same employees perform services that are attributable to two or more installations or industries.

ITEMS ON THE REPORT FORM

(Note: An entry is required for each item on the form. If the answer is "none," enter "none" or "0." If a particular question does not apply to the establishment reported, enter "not applicable" or explain briefly in the "Remarks" section.)

Item 1.--See report form.

Item 2.--See instructions on report form.

Item 3C.--Number of Oil and Gas Wells.--Classify "distillate" wells as oil wells if the value of all liquids produced is greater than the value of the gas produced. Otherwise classify them as gas wells.

Dry holes should be included on lines 3b, 6, 13, and 14a only. On line 14a include oil, gas, and dry wells, but exclude service wells and wells recompleted during 1954. Column (b) should be the sum of columns (c) and (d), if shown, except on lines 3d and 14a where column (b) may exceed this sum, since service wells are included in Item 3d and dry holes in Item 14a.

Item 3C3.--The figures for the number of "Oil," "Gas," "Dry," and "Service" wells, respectively, should be the same as the sums of the figures for corresponding wells "drilled by own company" and "drilled on contract" in Items 12A and B.

Items 3C4 and 3C10.--Include in Item 3C4 wells which you contracted in 1954 to operate and in Item 3C10 wells for which such a contract was terminated in 1954.

Item 4.--Employment and Payrolls in 1954, by Class of Employee.

Number of Employees in 1954. (Columns (b) through (f); lines A, B, and C.) Report all full-time and part-time employees at this establishment who worked or received pay for any part of the pay period (preferably one week) ended nearest the 15th of the months specified on the report form. Include all persons on paid sick leave, paid holidays, and paid vacation during these pay periods, and officers, if a corporation. Exclude members of armed forces and pensioners carried on your active rolls; proprietor or partners, if an unincorporated concern; and employees of contractors. Proprietors should be reported on lines D and E. (You may follow the definition of employees specified by your State Employment Security Agency.) If employment in any one of these pay periods was abnormally low because of a strike or for some other reason, state the reason therefor and report employment for the nearest normal pay period in the "Remarks" section of the form.

If your company was also engaged in this State in natural gasoline production, petroleum refining, other manufacturing, or wholesale or retail trade operations; for Census purposes, employees, such as medical staff and yardmen,

Pages 3 thru 5 are similar to instructions for MI-10B. (See pages App. A-10 thru A-13.)

acquired from others (including the United States Government).

Item 10.--Products and Services of This Establishment During 1954.--See instruction E above on "Transfer Values."

Item 10B.--Natural Gas.--"Gross production," as well as "Gross disposition," of gas should include the natural gas liquids content of the gas and the quantity of gas, estimated (if not metered), which was wasted or flared.

Interstate Transfer of Company Gas.--Company gas received from another State should be reported as purchased gas (10B3). Its disposition, whether for use in gas lift and repressuring, as in 6A and 10B4d and e, or for disposition otherwise, as in 10B4a, b, and f, should be included in the total of disposable gas. Company gas transferred to another State should be reported under other deliveries to industrial consumers, 10B4f(2)(c).

Item 10B3.--Purchased Natural Gas.--This quantity should include the quantities of natural gas reported in Item 6A1 and 6B3 above.

Item 10B4.--Disposition of Natural Gas.--Include residue gas from gas lift in a, d (1), e, f, or g, distributing the gas according to its use.

Item 10C.--Field Condensate and Drips.--Include on this line only oils shipped as condensate or drips. Do not attempt to segregate this item if it is marketed from tanks in which it is mixed with crude petroleum.

Item 10E.--Report separately amounts received or due for the following types of work performed for other establishments:

Geophysical exploration
Other exploration
Well surveying and well logging
Drilling oil, gas, dry, or service wells
Drilling water wells
Building, repairing, or dismantling rigs and derricks
Excavating slush pits or cellars
Running, cutting, and pulling casing, tubes, or rods
Cementing wells
Shooting wells
Perforating well casing
Acidizing and other chemical treatment of wells
Cleaning out, bailing out, or swabbing wells
Installing production equipment, such as well-head fittings, pumps, and engines
Erecting, cleaning, repairing, or dismantling lease tanks
Oil- and gas-field machine-shop work
Hauling oil- and gas-field supplies and equipment
Other work (Specify kind)

Item 11.--See instructions on report form.

Item 12.--Cost of Drilling and Equipping Wells Completed in 1954.--The purpose of this inquiry is to segregate the designated costs of wells drilled and/or equipped by you during 1954 and also to record the total amounts paid to contractors for wells drilled and/or equipped on contract for you during 1954. Include the cost of wells drilled by you and abandoned before completion during 1954. Include the cost of wells completed in 1954 although begun in 1953. Exclude the cost of drilling wells that were still in process of drilling or completion at the end of 1954. (Costs for wells reported in this item usually should differ from such costs reported in Item 9. Item 12 represents total costs for wells completed in 1954, irrespective of when started, whereas Item 9 includes only costs for work done in 1954, but covers costs for wells not yet completed at the end of 1954.)

Amounts paid to contractors for drilling and completing wells drilled on contract should be reported only in the last column. If all the wells were drilled and entirely completed on contract, with the contractor supplying the casing and other equipment (as on so-called "turnkey" jobs), all figures reported would be in the last column. If the amounts paid to contractors represented only the amounts paid for drilling wells on contract, and you supplied the casing or other well equipment, the cost of this equipment should be reported in the appropriate spaces under "Cost of well equipment." If part of the payment to contractors was in oil, estimate carefully the value of this oil and include it in the total amount paid to contractors. For wells "Drilled by own company," if some of the work or equipment in connection with drilling or equipping wells was furnished by contractors, report amounts paid contractors for this work or equipment in the last column and do not include it elsewhere under A or B.

Report only the tangible costs specified. Other costs such as taxes, interest on investment, overhead costs, etc., should not be included.

Under "Cost of drilling" report the cost of labor, supplies, water, fuel, and power used in such operations as the following: Moving on to location all equipment and supplies incidental to operations; excavating for derrick foundation; building derrick foundation; digging slush pit; erecting derrick and wiring same; building loading or pipe racks; laying fuel and water lines; rigging up; drilling hole; making straight-hole tests or surveys; coring; well logging and core analysis; testing formation; mud conditioning; reaming; running casing, screen, and liner; cleaning out; bailing; swabbing; fishing; repairing and maintaining rig or derrick; tearing down rig; dismantling derrick and racks; and moving equipment off location. Report the cost (including freight and express charges thereon) of all supplies used in the above operations, such as: Mud, weighting materials, and mud chemicals; lumber or timber for making forms, mud boxes, pipe racks, constructing derrick, etc.; cement, sand, and gravel; all

rig-operating supplies such as oils, grease, packing, rope, firebrick, etc.; all drilling bits, reamers, and core heads; hand tools; iron and steel for derrick and for blacksmithing; cordage and wire lines; and any additional supplies necessary for the operation of either rotary or cable-tool outfit. Deduct the value of materials salvaged after use. Include depreciation or amortization charges for the use of drilling machinery and tools in accord with best local practice; if the machinery and tools were rented, report the rentals thereon. Do not include here the costs of equipment chargeable to the well which should be reported under "Cost of well equipment." Include the total cost of water if purchased or cost of water well if drilled and chargeable to oil- or gas-well drilling operations. Include also all fuel or power used in connection with these operations. If some of the fuel or power was not purchased, include a carefully estimated value of such fuel or power used.

Under "Cost of well equipment" report the cost of all equipment chargeable to the wells reported in column (b) and necessary for production or capping. If any of the costs were in the form of payments to contractors, such payments should be segregated and reported in the last column only. Do not duplicate any costs reported under "Cost of drilling." Under "Cost of casing" include costs for transportation of the casing to the site of operations; for dry holes deduct the value of salvaged casing less the cost of salvaging. Under "Equipment for flowing or pumping and production derrick," include tubing, packers, flow lines, flow tanks, and oil and gas separators; wellhead fittings, such as Christmas tree and connections, tubing head, chokes, gauges, anchor clamps; and the cost of pumping derrick. If drilling derrick was left over well after completion and was used for production, exclude all costs of such derrick from "Cost of drilling," and report them only here.

Item 13. --Not applicable for these operations.

Form approved; Budget Bureau No. 41-54417

CONFIDENTIAL.—This report should be returned within 30 days of its receipt. This report is required by Act of Congress (13 U. S. C. 131). Your report is confidential and only sworn Census employees will have access to it. It cannot be used for purposes of taxation, investigation, or regulation.

This survey has been developed by the Bureau of the Census with the cooperation of the Bureau of Mines (U. S. Department of the Interior).

Only one report is required for your oil- and gas-field work for others in all States (including offshore operations.) Do not include in this report work performed for your own account or the operation of oil or gas wells; such oil- and gas-field work should be reported on Form MC-13A, Crude Petroleum and Natural Gas. **Please read enclosed instructions before completing report.**

Form MC-13C

U. S. DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

1954 CENSUS OF MINERAL INDUSTRIES

OIL- AND GAS-FIELD CONTRACT SERVICES

(Please correct any errors in name and address)

FOR CENSUS USE ONLY

State	SMA / SEA	County	City	City size	T. E.	V. A.	Industry	C/O	T. O.

ITEM 1 — LOCATION OF OPERATIONS COVERED BY THIS REPORT

List States, in order of importance, in which you did oil- or gas-field contract work during 1954.

ITEM 2 — NAME AND STATUS OF CONTRACTING COMPANY

A. Name and address

B. Federal Social Security Employer Identification Number
1. Enter number as reported on Form 941, Item 10, on latest employer's quarterly tax return under Federal Insurance Contributions Act _____

2. Number of separate establishments operated under this Employer Identification Number ☐ One ☐ Two or more

C. Form of ownership of contracting company (Check one)
☐ Individual proprietor ☐ Partnership ☐ Corporation (Do not include any form of cooperative association) ☐ Cooperative association (corporate or noncorporate) ☐ Other (Specify) _____

D. Company affiliation
1. Is this company (identified by the number given in Item 2B1) owned or controlled by another company? ☐ Yes ☐ No
2. If "Yes," give name and address of owning or controlling company _____
3. Does this company (identified by the number given in Item 2B1) own or control another company? ☐ Yes ☐ No

E. Change in status of operation of this establishment since December 31, 1953 (Check)
1. ☐ Operated by you during all of 1954
2. ☐ Purchased by you on _____ (date)
3. ☐ Sold by you on _____ (date)
4. ☐ Did not operate in 1954 (but still owned by you)
5. ☐ Went out of business (no new operator) on _____ (date)

Give name and address of former owner (if box "2" is checked) or purchaser (if box "3" is checked):

Note.—A report is required even if establishment operated for part of 1954 only.

ITEM 3 — NATURE OF ACTIVITY

Describe briefly the kind of activity of this establishment.

ITEM 4 — EMPLOYMENT AND PAYROLLS IN 1954, BY CLASS OF EMPLOYEE

Include both part-time and full-time workers. Exclude employees of subcontractors. (See General Instructions.)

Class of persons (a)	Number of employees in 1954 — Pay period ended nearest 15th of— Mar. (b)	May (c)	Aug. (d)	Nov. (e)	Average employment (lines A, B, and C, total of (b) through (e) ÷ (4)) (f)	Total 1954 payrolls (wages, salaries, bonuses, commissions, and other remuneration paid in entire year, before deductions) (omit cents) (g)
A. Production, development, and related employees					A1	A2 $
B. All other employees						$
C. Total, all employees (Sum of A and B)	L3X	L5X	L8X	L11X	A3	A4 $
D. Proprietors or firm members (not applicable to corporations)				L13*4	C1	
E. Proprietors or firm members (included in "D" above) regularly performing production, development, and related work at these operations					C2*	

ITEM 5 MAN-HOURS OF PRODUCTION, DEVELOPMENT, AND RELATED EMPLOYEES IN 1954, BY KIND OF WORK

Do not include hours for paid vacations, holidays, or sick leave; or hours worked by employees of subcontractors. Estimates are acceptable where exact records are not available.

Kind of work (a)	B1X Code	B6* Total man-hours worked during 1954 (b)
A. Drilling wells and rig building	52	
B. Exploration work (except drilling)	53	
C. Other work (Specify)	80	
D. **Total,** all production, development, and related workers (Sum of A, B, and C)	90	A5

ITEM 6 SUPPLIES, FUELS, ELECTRIC ENERGY, SUBCONTRACT WORK, MACHINERY, AND PURCHASES FOR RESALE IN 1954

Include all such items charged to **both current and capital accounts.** (Costs charged to capital accounts should also be included in Item 9.) Report totals for supplies, fuels, and machinery actually used or installed in 1954, whether purchased, withdrawn from inventories, or received from other establishments of this company. "Cost" refers to amounts actually paid or payable after discounts, and includes freight and other direct charges incurred in acquiring the items. Report the approximate commercial values for items transferred from other establishments of this company. "Subcontract work" represents amounts paid or due for work done for you by contractors, such as portions of your oil- and gas-field work which you subcontracted; include also contract work performed for you in construction of your shops, offices, etc.

Item (a)	D1 Code	Unit of measure (b)	D2 Quantity (c)	D3* Total cost (omit cents) (d)
A. Purchased supplies used (such as drill bits and reamers, drilling fluid materials, cement, lumber, pipe, parts for renewals and repairs, lubricants, and water purchased)	00			$
B. Purchased fuels used (Check the kinds of fuels used. Exclude fuels furnished without charge by the oil or gas companies for whom you performed work.)				
1. Coal: (11) ☐ Bituminous or lignite (12) ☐ Pennsylvania anthracite		Short ton		$
2. Fuel oil: (31) ☐ Distillate (light) (32) ☐ Residual (heavy)		Bbl. (42 gals.)		$
3. Gas: (41) ☐ Natural (42) ☐ Manufactured or mixed		MCF		$
4. Other fuels: ☐ Gasoline ☐ Liquefied petroleum gas ☐ Wood ☐ Coke ☐ Other	50			$
C. Electric energy (Exclude energy purchased for resale)—		E1,2		
1. Purchased	60	kwh		$
2. Generated (gross less generating-station use)		kwh E3		
3. Sold (in "Cost" column report value of energy sold)		kwh E4.5*		$
D. Subcontract work done for you by others	70			$
E. Purchased machinery installed for your own use (Report all new and used machinery, equipment, parts, and used plant, not included above)	80			$
F. Products purchased for resale without further processing	85			$
G. **Total** cost of supplies, fuels, purchased electric energy, subcontract work, machinery, and purchases for resale (Sum of A, B, C1, D, E, and F)	OV			$

ITEM 7 WATER USE DURING 1954

Report the total gallons of water intake and discharge for **entire year** 1954. Exclude water furnished without charge by companies for which you did this contract work. **Estimates are acceptable wherever exact records are not available.** Include water used that was produced with oil. If total intake was less than 10 million gallons in 1954, you need complete only section A, column (b), and section C.

Item (a)	HB H1 Code 299	Gallons for the entire year (in millions) Total (b)	Water used for flooding included in "Total" (c)
A. Water intake		H2	H3
1. Fresh water		H4	H5
2. Brackish (salt) water			
B. Water discharge		H6	
1. Fresh water		H7	
2. Brackish (salt) water			

C. Principal source of fresh water intake (Check appropriate box) H8*

(1) ☐ Public water systems (municipally or privately owned) (2) ☐ Company surface water systems, such as streams or lakes (3) ☐ Company ground water systems, such as wells or deep springs

ITEM 8 HORSEPOWER RATING OF POWER EQUIPMENT AT END OF 1954

The figures given should represent **total** horsepower rating of equipment **in use or available for use at the end of 1954.** Both stationary and mobile equipment should be included. Report horsepower rating indicated on name plates.

Kind of power equipment (a)	F1X Code	F5* Total horsepower rating (at end of year) (b)
A. Internal-combustion engines, steam engines and turbines, and other prime movers		
1. In highway-type equipment	11	hp.
2. In all other equipment		
a. Driving generators	12	hp.
b. Not driving generators	13	hp.
B. Electric motors (1 horsepower and over)	14	hp.

ITEM 9 CAPITAL EXPENDITURES FOR THIS CONTRACTING COMPANY DURING 1954 (Exclude expenditures for land)

Expenditures refer to all costs actually incurred during 1954 in connection with the oil- and gas-field contracting work of this company, whether on contract or by your own forces, which are **chargeable to the fixed assets accounts** of this establishment and which are of the type for which depreciation accounts are ordinarily maintained. Do not include cost of maintenance and repairs charged as current operating expense.

Item (a)	FOR CENSUS USE ONLY A6, G1	A7, G2X	A8	A9*	Expenditures (omit cents) (b)
A. New construction and major alterations of buildings and other fixed plants and structures					G5 $
B. New machinery and equipment					G6 $
C. Used plant and used equipment acquired from other owners					G7 $
D. **Total** capital expenditures (Sum of A, B, and C)					G8* $

Please continue form and sign certification on reverse

(OVER)

Form MC–13C—Oil and Gas-Field Contract Services

ITEM 10 SERVICES OF THIS ESTABLISHMENT DURING 1954	Kind of work performed (a) K	Amount received or due (omit cents) (e)	Census product code (j)
	A. Work performed for companies operating oil or gas wells (report total amounts received or due you for oil- and gas-field contract work done during 1954. Do not include amounts received for work done prior to 1954.)		
	1. Geophysical exploration	$	13398 13
	2. Other exploration	$	13398 15
	3. Well surveying and well logging	$	13398 17
	4. Drilling oil, gas, dry, or service wells	$	13318 01
	5. Drilling water wells	$	13398 71
	6. Building, repairing, or dismantling rigs and derricks	$	13328 01
	7. Excavating slush pits or cellars	$	13398 21
	8. Running, cutting, and pulling casing, tubes, or rods	$	13398 31
	9. Cementing wells	$	13398 41
	10. Shooting wells (nitroglycerine made and consumed _____ thousands of pounds)	$	13398 51
	11. Perforating well casing	$	13398 53
	12. Acidizing and other chemical treatment of wells	$	13398 55
	13. Cleaning out, bailing out, or swabbing wells	$	13398 61
	14. Installing production equipment, such as wellhead fittings, pumps, and engines	$	13398 81
	15. Erecting, cleaning, repairing, or dismantling lease tanks	$	13398 83
	16. Oil- and gas-field machine-shop work	$	76998 11
	17. Hauling oil- and gas-field supplies and equipment	$	42120 21
	18. Other work (Specify kind)	$	
	B. Sales of products purchased and resold without further processing	$	50990 11
	C. **Total** amount received or due (Sum of A and B)	$	99

ITEM 11 STATE DATA

List below the States in which you performed oil- or gas-field contract work during 1954 (include figures for off-shore operations with the figures for the State contiguous to these operations). Total figure in col. (b) should equal the total of Item 10, lines 1 through 18. Total figure in col. (c) should equal the figure in Item 4C, col. (b).

State (a) HC	H1 Code	H2 Amount received or due for work performed in 1954 (omit cents) (b)	H3* Number of employees in pay period ended nearest March 15, 1954 (c)
	3	$	
	3	$	
	3	$	
	3	$	
	3	$	
Total, all States	3	$	

ITEM 12 COST OF DRILLING AND EQUIPPING WELLS COMPLETED BY YOU ON CONTRACT FOR OTHERS IN 1954

Report here the designated costs of drilling and equipping all wells drilled by you on contract for others. Report only the costs specified; do not include other costs such as taxes, interest on investment, etc. **Do not** report the cost of wells drilled for your own account and not on contract for others. **Do not** include costs borne directly by oil or gas companies and not covered by amounts received by you for contract work.

W	Kind of wells drilled on contract (a)	Code	Wells completed during 1954: Number of wells (b)	Wells completed during 1954: Total footage drilled (c)	Cost of drilling and equipping wells on contract for oil or gas companies. Exclude costs borne directly by these companies (omit cents): Costs, excluding amounts paid subcontractors: Cost of drilling [1] (d)	Cost of well equipment [2]: Casing (e)	Cost of well equipment [2]: Equipment for flowing or pumping and production derrick [3] (f)	Total of preceding drilling and equipment cost items (g)	Total amounts paid or due subcontractors for drilling or equipping wells (omit cents) (h)
	A. Oil wells	801			$	$	$	$	$
	B. Gas wells	802			$	$	$	$	$
	C. Dry holes [4]	803			$	$	$	$	$
	D. Service wells [5]	804			$	$	$	$	$
	E. **Total** (Sum of A, B, C, and D)	80V			$	$	$	$	$
	F. Wells recompleted	811			$	$	$	$	$

[1] Report cost of labor, supplies, water, fuel, and power used in such operations as erecting and dismantling drilling-rig and derrick, drilling hole, running and cementing casing, and hauling materials; include machinery and tool charges or rentals, deduct the value of material salvaged after use. **Do not** include here cost of drilling derrick that was left over well for production after well completion.

[2] Include cost of delivering and installing equipment, but do not duplicate costs reported under "Cost of drilling." Deduct value of your equipment that was salvaged and used again, but include cost of salvaging.

[3] Include tubing, wellhead fittings, gas traps, flow tanks, etc., and drilling derrick retained over well after completing, or special-production derrick.

[4] Include wells drilled and abandoned without commercial production during 1954.

[5] Include gas-injection, water-injection, brine-disposal, and underground-storage wells.

ITEM 13 Not applicable for these operations.

REMARKS

ITEM 14 CHECKS TO ASSURE A COMPLETE AND ACCURATE REPORT

The Census Bureau reviews your report for omissions, inconsistencies, and unusual ratios. To save you future correspondence about these problems, please make the following checks **before** returning your report:

(1) Review the report carefully to see that no items are omitted.
(2) Copy the figures requested in Columns I and II below; analyze your results in Column III below.
(3) Correct your report for any errors you find; explain unusual figures in "Remarks" section.

Copy in Column I the figures reported in—	Column I	Copy in Column II the figures reported in—	Column II	Divide Column I by Column II; show result in Column III	Column III
Item 4A, Col. (g) (Production worker wages)	$	Item 5D (Total man-hours)		Average hourly wages per worker	$
Item 5D (Total man-hours)		Item 4A, Col. (f) (Average production workers)		Hours worked per year per worker	
Item 4C, Col. (g) (Total salaries and wages)	$	Item 4C, Col. (f) (Average total employment)		Average annual earnings per employee	$
Item 4C, Col. (g), plus Item 6G (Total salaries and wages, and cost of supplies, etc.)	$	Item 10C plus Item 9D (Receipts for services and capital expenditures)	$	Principal expenses per dollar of receipts for services and capital expenditures	¢

ITEM 15 CERTIFICATION

Name and address of person who should be contacted if questions arise regarding this report — Telephone No.

This report is substantially accurate and covers the period from _____ to _____

Date — Title — Signature of authorized person

INST.
MC-13C

Department of Commerce
Bureau of the Census

1954 CENSUS OF MINERAL INDUSTRIES

GENERAL INSTRUCTIONS FOR PREPARING REPORTS ON FORM MC-13C OIL- AND GAS-FIELD CONTRACT SERVICES

INTRODUCTION

A. WHO SHOULD REPORT?

Every concern which receives a form is required to submit a Census report for all oil- and gas-field contract work performed for other concerns during any part of the calendar year 1954. The report should be returned to the office shown on the enclosed envelope within 30 days of its receipt. A copy is also enclosed for your files. If you also operate wells, mines, or manufacturing plants, or have wholesale or retail trade operations for which you have not received forms, please write to the Bureau of the Census, United States Department of Commerce, Washington 25, D. C., indicating the number of establishments not covered and their type of activity. (Note--if you received a copy of Form NC-X2, use it to request such additional forms.)

B. WHAT IS A MINERAL ESTABLISHMENT?

An oil- and gas-field contract service establishment is defined, for Census purposes, as representing all oil- and gas-field services performed on contract by a company in the continental United States and its territories of Hawaii and Alaska, except operation of wells on contract. Offshore operations in the contiguous territories are included. It should not include any significant amount of other types of contract work; or the operation of mineral producing, manufacturing, or other establishments. In order to segregate such operations a limited amount of prorating or estimating may be necessary. An establishment is not necessarily identical with the business concern or firm which may consist of one or more establishments. It is also to be distinguished from organizational subunits, departments, or divisions within an establishment.

C. WHAT KIND OF ACTIVITIES SHOULD THIS REPORT COVER?

Form MC-13C should be used only by concerns engaged in performing oil- or gas-field contract work for others. Include in the report such work as exploration for oil and gas; drilling oil, gas, dry, and service wells; drilling water wells for oil-field use; building derricks and lease tanks; running and pulling casing; cementing and shooting wells; and installing production equipment. Also include such activities as the generation of power by your company for these operations; maintenance of equipment; receiving, shipping, storage, research, record keeping, health, safety, food service, and other services, when carried on in connection with your oil- or gas-field contract services. Your report should exclude contract operation of wells and contract services performed for other than oil- or gas-field operations.

If you were engaged in oil- or gas-field operations for your own account or operated wells on contract, you should prepare a report on Form MC-13A, Crude Petroleum and Natural Gas.

D. WHAT PERIOD SHOULD EACH REPORT COVER?

Each report should cover the calendar year 1954. If your book records are not on a calendar-year basis, carefully prepared estimates for this period will be accepted. If, however, this procedure will cause you considerable additional costs, please write to the Bureau of the Census stating your fiscal-year period and explaining your reporting problems in detail, and we will let you know whether an exception may be made.

The dates given in the certification should show the exact period for which this report is made. Thus, if your company began to operate or ceased to operate within the year 1954, the dates given should show that only part of a year is covered by the report. Where there were operations during part of the year under other management, complete the report only for that part of the year 1954 in which you operated the establishment.

ITEMS ON THE REPORT FORM

(Note: An entry is required for each item on the form. If the answer is "none," enter "none" or "0." If a particular question does not apply to the establishment reported, enter "not applicable" or explain briefly in the "Remarks" section.)

Item 1.--Location of Operations Covered by this Report.--Enter the States, or Territories, in which you performed oil- or gas-field contract services. Show these States in order of importance on the basis of your total receipts for such work.

Item 2.--See instructions on report form.

Item 3.--See instructions on report form.

Item 4.--Employment and Payrolls in 1954, by Class of Employee.

Pages 2 thru 4 are similar to instructions for MI-10B. (See pages App. A-9 thru A-13.)

Item 10A1.--Geophysical Exploration.--Include magnetic, seismic, gravity, electrical, geochemical, and radioactive methods.

Item 11.--See instructions on report form.

Item 12.--Cost of Drilling and Equipping Wells Completed by you on Contract for Others in 1954.--The purpose of this inquiry is to segregate your principal costs of drilling and/or equipping wells (oil, gas, dry, or service) on contract for oil or gas companies during 1954. Include the cost of wells drilled by you for oil or gas companies and abandoned before completion in 1954. Include the cost of wells completed in 1954 although begun in 1953. Exclude the cost of drilling wells that were still in process of drilling or completion at the end of 1954. Do not include the cost of wells, if any, drilled for your own account and not on contract for oil or gas companies. (Costs reported in this item represent work done for other companies. They should not be included in the costs reported in Item 9, which should represent only capital expenditures for your own account.)

Amounts paid by you to subcontractors for work on the wells drilled or completed by you for oil or gas companies should be reported only in the last column.

Report only the costs specified. Note that these do not include taxes, interest on investment, overhead costs, etc. Include only the part of costs of drilling and/or equipping wells which was for work or equipment furnished by you on contract for oil and gas companies. Exclude the costs for work or equipment furnished by oil or gas companies and not covered by the amounts received by you for contract work.

Under "Cost of drilling" report the cost of labor, supplies, water, fuel, and power used in such operations as the following: Moving on to location all equipment and supplies incidental to operations; excavating for derrick foundation; building derrick foundation; digging slush pit; erecting derrick and wiring same; building loading or pipe racks; laying fuel and water lines; rigging up; drilling hole; making straight-hole tests or surveys; coring; testing formation; mud conditioning; reaming; running casing, screen, and liner; cleaning out; bailing; swabbing; fishing; repairing and maintaining rig or derrick; tearing down rig; dismantling derrick and racks; and moving equipment off location. If any of the above operations were performed for you on sub-contract, exclude amounts paid to sub-contractors for such work. Report cost (including freight and express charges thereon) of all supplies used in the above operations, such as: Mud, weighting materials, and mud chemicals; lumber or timber for making forms, mud boxes, pipe racks, constructing derrick, etc.; cement, sand, and gravel; all rig-operating supplies such as oils, grease, packing, rope, firebrick, etc.; all drilling bits, reamers, and core heads; hand tools; iron and steel for derrick and for blacksmithing; cordage and wire lines; and any additional supplies necessary for the operation of either rotary or cable tool outfit. Deduct the value of materials salvaged after use. Include depreciation or amortization charges for the use of drilling machinery and tools in accord with best local practice; if the machinery and tools were rented report the rentals thereon. Do not include here the cost of equipment chargeable to the well which should be reported under "Cost of well equipment." Include the total cost of water if purchased or cost of water well if drilled and chargeable to oil- or gas-well drilling operations. Include also all fuel or power used in connection with these operations. If some of the fuel or power was not purchased, include a carefully estimated value of such fuel or power used.

Under "Cost of well equipment" report the cost of all equipment chargeable to the wells reported in column (b) and necessary for production or capping. If any of the costs were in the form of payments to subcontractors, such payments should be segregated and reported in the last column only. Exclude the cost of equipment furnished by oil or gas companies and not covered in the amounts received by you for contract work. Do not duplicate any costs reported under "Cost of drilling." Under "Cost of casing" include costs for transportation of the casing to the site of operations; for dry holes deduct the value of salvaged casing less the cost of salvaging. Under "Equipment for flowing or pumping and production derrick," include tubing, packers, flow lines, flow tanks, and oil and gas separators; wellhead fittings, such as Christmas tree and connections, tubing head, chokes, gauges, anchor clamps; and cost of pumping derrick. If drilling derrick was left over well after completion and was used for production, exclude all costs of such derrick from "Cost of drilling" and report them only here.

Item 13.--Not applicable for these operations.

Form Approved; Budget Bureau No 41-54440

CONFIDENTIAL.—This report should be returned within 30 days of its receipt. This report is required by Act of Congress (13 U. S. C. 131). Your report is confidential and only sworn Census employees will have access to it. It cannot be used for purposes of taxation, investigation, or regulation.

This survey has been developed by the Bureau of the Census with the cooperation of the Bureau of Mines (U. S. Department of the Interior).

A separate report is required for each State (including offshore operations) in which you operated or drilled oil or gas wells, or performed exploration work for oil or gas. The report should be on a gross basis for all leases operated by you, but should exclude your interests in leases operated by others. Do not include in this report the operation of natural-gasoline plants or petroleum refineries.

Form MC- 13 S

U. S. DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

1954 CENSUS OF MINERAL INDUSTRIES

OIL AND GAS (Short Form)

(Please correct any errors in name and address)

FOR CENSUS USE ONLY

State	SMA / SEA	County	City	City size	T. E.	V. A.	Industry	C/O	T. O.

ITEM 1 LOCATION

State in which properties covered by this report are located.

ITEM 2 NAME AND STATUS OF OPERATING COMPANY

A. Name and address

B. Federal Social Security Employer Identification Number
1. Enter number as reported on Form 941, Item 10, on latest employer's quarterly tax return under Federal Insurance Contributions Act.....

2. Number of separate establishments operated under this Employer Identification Number ☐ One ☐ Two or more

C. Form of ownership of operating company (Check one)
☐ Individual proprietor ☐ Partnership ☐ Corporation (Do not include any form of cooperative association) ☐ Cooperative association (Corporate or noncorporate) ☐ Other (Specify)

D. Company affiliation
1. Is this company (identified by the number given in Item 2B1) owned or controlled by another company?..... ☐ Yes ☐ No
2. If "Yes," give name and address of owning or controlling company

3. Does this company (identified by the number given in Item 2B1) own or control another company?..... ☐ Yes ☐ No

E. Period operations were conducted during 1954 for production or development purposes:
From to

F. Status of properties if no oil or gas was produced during 1954 (Check one)
☐ Drilling only ☐ Exploration work only ☐ Abandoned

NOTE: A report is required even if no oil or gas was produced in 1954, or if your company operated for part of 1954 only.

ITEM 3 NATURE OF OPERATIONS COVERED BY THIS REPORT

A. Nature of activity (Describe briefly the kind of activity of this establishment)

B. Was this company engaged in any offshore oil or gas operations in territories contiguous to the State designated in Item 1? ☐ Yes ☐ No

C. Number of oil wells and gas wells (including condensate wells) operated by you in the State (or contiguous offshore territories) designated in Item 1. If a well produced both oil and gas, classify it according to its more valuable total product; do not report it as both an oil and gas well.

Item	HA H1 Code	Number of wells H2 Total	H3 Oil	H4* Gas
1. Producing during any part of 1954	134			
2. Drilled and completed in 1954				
a. Producing wells	103			
b. Dry holes	104			
c. Service wells	105			
d. Wells recompleted in 1954	106			
3. Producing during December 1954	121			

ITEM 4 EMPLOYMENT AND PAYROLLS IN 1954 (Include both part-time and full-time workers. Exclude employees of contractors.)

Class of persons (a)	Number of employees in 1954 — Pay period ended nearest 15th of— L3x March (b)	L5x May (c)	L8x August (d)	L11x November (e)	A1, 3 Average employment (Total of (b) through (e)÷4) (f)	A2, 4X Total 1954 payrolls (wages, salaries, bonuses, commissions, and other remuneration paid in entire year, before deductions) (omit cents) (g)
A. Employees						$
B. Number of proprietors or firm members (not applicable to corporations)				L13* 4	C1	
C. Number of proprietors or firm members (included in "B" above) regularly performing production, development, and related work on these properties					C2*	

ITEM 5

Not applicable to these operations.

ITEM 6 COST OF SUPPLIES, ETC. IN 1954

Item (a)	D1X Code	D3* Cost (omit cents) (b)
A. Cost of supplies, fuels, and electric energy used; and cost of purchased machinery installed	90	$
B. Cost of contract work done for you by others (Report name and address of contractor under "Remarks.")	70	$

ITEM 7

Not applicable to these operations.

ITEM 8 HORSEPOWER RATING OF POWER EQUIPMENT AT END OF 1954

Kind of power equipment (a)	F1X Code	F5* Total horsepower rating of equipment (b)
A. Internal-combustion engines, steam engines and turbines, and other prime movers		
1. In highway-type equipment	11	hp.
2. In all other equipment	15	hp.
B. Electric motors (1 horsepower and over)	14	hp.

ITEM 9 CAPITAL EXPENDITURES DURING 1954 (Exclude expenditures for land and mineral rights.)

Item (a)	FOR CENSUS USE ONLY A6, G1	A7, G2	A8	A9*	Expenditures (omit cents) (b)
A. Development and exploration of mineral properties and new construction and major alterations of buildings and other fixed plants and structures				G3X	$
B. New machinery and equipment				G6	$
C. Used plant and used equipment acquired from others				G7	$
D. **Total** capital expenditures (sum of A, B, and C)				G8*	$

Please continue form and sign certification on reverse

(OVER)

Form MC-13S—Oil and Gas (Short Form)

ITEM 10 PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1954

Report separately each product listed; do not combine product lines. Include all products of this establishment which were produced or shipped during 1954. Include products shipped on consignment, whether or not sold at the end of 1954. Include products transferred to other establishments of your company (such as to your natural-gasoline plants or separate sales branches).
Report the entire output of wells operated by you and reported in Item 3, including royalty interests and subsidy payments.

Product or work done (a)	K Unit of measure (b)	Quantity (d)	Total value at wells (omit cents) (e)	Census product code (j)
A. Crude petroleum shipped	Barrel		$	13122 02
B. Natural gas				
1. Gross production				
a. Gas from oil wells (casinghead)	MCF			13131 12
b. Gas from gas wells (including condensate wells)	MCF			13131 13
c. **Gross production** (sum of a and b)	MCF			13131 01
2. Net deliveries to natural-gasoline plants (Gross deliveries less residue gas returned). In value include, besides the value of the residue gas, the producer's realization from all products contained in the gas delivered to natural gasoline plants	MCF		$	13132 04
3. Other deliveries				
a. To distributors and transmission companies	MCF		$	13132 21
b. To consumers	MCF		$	13132 30
C. Field condensate and drips shipped	Barrel		$	13121 61
D. Other products shipped (Specify kind and unit of measure)				
1.			$	
2.			$	
E. Amount received or due for work or services performed for other establishments during 1954, such as drilling, hauling, pumping, etc. (Specify kind of work)				
1.			$	131
2.			$	131
F. **Total value** (Sum of A through E)			$	131 9 99

ITEM 11 COUNTY DATA

List below the counties in the State covered by this report in which you operated oil- or gas-field properties during 1954. Total figure in Col. (b) should equal figure in Item 10A Col. (d). Total figures in Col. (c) should equal figure in Item 4A Col. (b).

County (or parish) (a)	HC H1 Code	H2 Crude petroleum shipped in 1954 (bbls.) (b)	H3* Number of employees in pay period ended nearest March 15, 1954 (c)
	3		
	3		
	3		
	3		
Total, all counties (or parishes)	3		

ITEM 12 COST OF DRILLING AND EQUIPPING WELLS COMPLETED IN 1954

Report here the designated costs of drilling and equipping all wells reported under Item 3 C2, including the cost of dry holes and service wells drilled during 1954. Report only the costs specified; do not include other costs such as taxes, interest on investments, etc.

W Kind of wells drilled (a)	Code	Wells completed during 1954: Number of wells (b)	Wells completed during 1954: Total footage drilled (c)	Cost of drilling and equipping wells, excluding amounts paid to contractors (omit cents): Cost of drilling [1] (d)	Cost of drilling and equipping wells, excluding amounts paid to contractors (omit cents): Cost of well equipment [2] (e)	Total amounts paid or due contractors for drilling or equipping wells (omit cents) (h)
A. Oil wells	10			$	$	$
B. Gas wells	10			$	$	$
C. Dry holes [3]	10			$	$	$
D. Service wells [4]	10			$	$	$
E. **Total** (sum of A through D)	10V			$	$	$
F. Wells recompleted	111			$	$	$

G. Were the above wells drilled (Check) ☐ By own company ☐ On contract for you by others

[1] Report cost of labor, supplies, water, fuel, and power used in such operations as erecting and dismantling drilling rig and derrick, drilling hole, running and cementing casing, and hauling materials; include machinery and tool charges or rentals, deduct the value of material salvaged after use. **Do not** include here cost of drilling derrick that was left over well for production after well completion.

[2] Include cost of delivering and installing equipment, but do not duplicate costs reported under "Cost of drilling." Deduct value of your equipment that was salvaged and was used again, but include cost of salvaging. Include cost of casing, tubing, wellhead fittings, gas traps, flow tanks, etc., and drilling derrick retained over well after completion, or special-production derrick.

[3] Include wells drilled and abandoned without commercial production during 1954.

[4] Include gas-injection, water-injection, brine-disposal, and underground-storage wells.

ITEM 13

Not applicable for these operations.

REMARKS

ITEM 14 CHECKS TO ASSURE A COMPLETE AND ACCURATE REPORT

The Census Bureau reviews your report for omissions, inconsistencies, and unusual ratios. To save you future correspondence about these problems, please make the following checks before returning your report:

(1) Review the report carefully to see that no items are omitted.
(2) Copy the figures requested in Columns I and II below; analyze your results in Column III below.
(3) Correct your report for any errors you find; explain unusual figures in "Remarks" section.

Copy in Column I the figures reported in—	Column I	Copy in Column II the figures reported in—	Column II	Divide Column I by Column II; show result in Column III	Column III
Item 4A, Col. (g) (Total salaries and wages)	$	Item 4A, Col. (f) (Average employment)		Average annual earnings per employee	$
Item 4A, Col. (g), plus Item 6 (Total salaries and wages and cost of supplies, etc.)	$	Item 10F plus Item 9D (Value of shipments and capital expenditures)	$	Principal expenses per dollar of shipments and capital expenditures	¢

ITEM 15 CERTIFICATION

Name and address of person who should be contacted if questions arise regarding this report. Telephone No.

This report is substantially accurate and covers the period from _____ to _____

Date _____ Title _____ Signature of authorized person _____

Form approved; Budget Bureau No. 41-54429.

CONFIDENTIAL.—This report should be returned within 30 days of its receipt. This report is required by Act of Congress (13 U. S. C. 131). Your report is confidential and only sworn Census employees will have access to it. It cannot be used for purposes of taxation, investigation, or regulation.

This survey has been developed by the Bureau of the Census with the cooperation of the Bureau of Mines (U. S. Department of the Interior). The Bureau of Mines is also participating in conducting the 1954 Census of Mineral Industries.

A separate report is required for each mine, quarry, or separately operated mill or crushing plant. **Please read enclosed instructions before completing report.**

Form MC- 14 A

U. S. DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

1954 CENSUS OF MINERAL INDUSTRIES

STONE

(Please correct any errors in name and address)

FOR CENSUS USE ONLY

State	SMA / SEA	County	City	City size	T. E.	V. A.	Industry	C/O	T. O.

ITEM 1 — NAME AND LOCATION OF ESTABLISHMENT

Name and location of establishment (a)	Mine or quarry (b)	Mill or crushing plant (c)
A. Name of operation		
B. Location		
1. Minor civil division (Where applicable, report section, township, and range)		
2. County		
3. State		
C. City or village (within which or nearest which located)		

ITEM 2 — NAME AND STATUS OF OPERATING COMPANY

A. Name and address

B. Federal Social Security Employer Identification Number
1. Enter number as reported on Form 941, Item 10, on latest employer's quarterly tax return under Federal Insurance Contributions Act. _____

2. Number of separate establishments operated under this Employer Identification Number ☐ One ☐ Two or more

C. Form of ownership of operating company (Check one)
☐ Individual proprietor ☐ Partnership ☐ Corporation (Do not include any form of cooperative association) ☐ Cooperative association (corporate or non-corporate) ☐ Other (Specify)

D. Company affiliation
1. Is this company (identified by the number given in Item 2B1) owned or controlled by another company? ☐ Yes ☐ No
2. If "Yes," give name and address of owning or controlling company _____
3. Does this company (identified by the number given in Item 2B1) own or control another company? ☐ Yes ☐ No

E. Change in status of operation of this establishment since December 31, 1953 (Check)
1. ☐ Operated by you during all of 1954
2. ☐ Purchased or leased by you on _____ (date)
3. ☐ Sold or leased to another operator on _____ (date)
4. ☐ Did not operate in 1954
5. ☐ Went out of business (no new operator) on _____ (date)

Give name and address of former owner or lessee (if box "2" is checked) or purchaser or lessee (if box "3" is checked):

NOTE.—**A report is required even if establishment operated for part of 1954 only or produced no minerals in 1954.**

F. Status of establishment if no minerals were produced during 1954 (Check one)
☐ Development and exploration work only ☐ Idle ☐ Abandoned ☐ Exhausted

ITEM 3 — NATURE OF OPERATIONS COVERED BY THIS REPORT

A. Nature of activity (Describe briefly the kind of activity of this establishment)

B. Type of operation. (Check one or more)
☐ Underground mine ☐ Open quarry ☐ Crushing plant ☐ Mill ☐ Other (Specify)

C. Preparation methods used (Check one or more and underscore the dominant method)
☐ Sawing ☐ Planing ☐ Turning ☐ Crushing ☐ Screening ☐ Washing
☐ Other (Specify)

ITEM 4 — EMPLOYMENT AND PAYROLLS IN 1954, BY CLASS OF EMPLOYEE (Include workers paid on a tonnage basis. Exclude employees of contractors.) (See General Instructions.)

Class of persons (e)	Number of employees in 1954 — Pay period ended nearest 15th of— Jan. (b)	Feb. (c)	Mar. (d)	Apr. (e)	May (f)	June (g)	July (h)	Aug. (i)	Sept. (j)	Oct. (k)	Nov. (l)	Dec. (m)	Average employment (Total of (b) thru (m)+12) (n)	Total 1954 payrolls (wages, salaries, bonuses, commissions, and other remuneration paid in entire year, before deductions) (omit cents) (o)
A. Production, development, and related employees													A1	A2 $
B. All other employees														$
C. **Total,** all employees (Sum of A and B)	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12*	A3	A4 $
D. Proprietors or firm members (not applicable to corporations)													C1	
E. Proprietors or firm members (included in "D" above) regularly performing production, development, and related work at this establishment													C2	

ITEM 5 — MAN-HOURS OF PRODUCTION, DEVELOPMENT, AND RELATED EMPLOYEES IN 1954, BY DEPARTMENT (Do not include hours for paid vacations, holidays, or sick leave.)

Department (e)		B1x Code	B6* Total man-hours worked during 1954 (h)
A. At mine or quarry	1. Underground (mining and development)	11	
	2. Open quarry (mining and stripping)	15	
	3. Surface (including mine shops and yards)	31	
B. At mill or crushing plant (including auxiliary works for this mill or plant)		41	
C. **Total,** all production, development, and related workers (Sum of A and B)		90	A5
D. Man-hours included above which were spent on development and exploration work [1]		51	

[1] Report total man-hours in 1954 devoted to development and exploration work charged to capital or depletion accounts, such as shaft sinking, exploration drilling, and overburden stripping charged to such accounts.

ITEM 6 — SUPPLIES, FUELS, ELECTRIC ENERGY, CONTRACT WORK, AND MACHINERY IN 1954

Include all such items charged to both current and capital accounts. (Costs charged to capital accounts should also be included in Item 9.) Report totals for supplies, fuels, and machinery actually used or installed in 1954, whether purchased, withdrawn from inventories, or received from other establishments of this company. "Cost" refers to amounts actually paid or payable after discounts, and includes freight and other direct charges incurred in acquiring the items. Report the approximate commercial values of items transferred from other establishments of this company. Contract work should include amounts paid or due contracting concerns for work done during 1954 in connection with the operation or development of this establishment, such as pumping, tunneling, shaft sinking, stripping, boring test holes, shop work, repair work, and construction.

Item (a)	D1 Code	Unit of measure (b)	D2 Quantity (c)	D3* Total cost (omit cents) (d)
A. Supplies used (See General Instructions)	00			$
B. Fuels consumed (Report quantities in units specified; report **total** delivered cost, not cost per unit. Check the kinds of fuels used.)				
1. Coal: (11) ☐ Bituminous or lignite (12) ☐ Pennsylvania anthracite		Short ton		$
2. Fuel oil: (31) ☐ Distillate (light) (32) ☐ Residual (heavy)		Bbl. (42 gals.)		$
3. Gas: (41) ☐ Natural (42) ☐ Manufactured or mixed		M cu. ft.		$
4. Other fuels: ☐ Gasoline ☐ Liquefied petroleum gas ☐ Wood ☐ Coke ☐ Other	50			$
C. Electric energy (Exclude energy purchased for resale)		E1, 2		
1. Purchased	60	kwh		$
2. Generated (gross less generating-station use)		kwh E3		
3. Sold (in "Cost" column report value of energy sold)		kwh E4, 5*		$
D. Contract work done for you by others	70			$
E. Purchased machinery installed (include all new and used machinery, parts, and used plant not included above)	80			$
F. Products purchased for resale without further processing	85			$
G. **Total** cost of supplies, fuels, purchased electric energy, contract work, machinery, and purchases for resale (Sum of A, B, C1, D, E, and F)	0V			$

ITEM 7 — WATER USE DURING 1954

Report the total gallons of water (fresh plus brackish) intake, discharge, and estimated total use in mine, mill, or crushing plant for the entire year 1954. Include water furnished without charge to your contractors for use at this establishment. Estimates are acceptable wherever exact records are not available. If total intake, and also total water pumped for drainage, was less than 10 million gallons you need complete only sections A and E in this item.

Item (a)		Gallons for the entire year (in millions) (b)
A. Water intake (except mine water)	C3	
B. Water discharged (except mine water)	C4	
C. Mine water	C5	
1. Used, such as intake for mill or crushing plant		
2. Drained and discharged	C6	
D. Was any water recirculated or re-used? (Check one) ☐ Yes ☐ No	C7	
If "Yes," show estimated total amount of water which would have been required if no water had been recirculated or re-used	C8*	
E. Principal source of fresh water intake, except mine water. (Check appropriate box) (1) ☐ Public water systems (municipally or privately owned) (2) ☐ Company surface water systems (3) ☐ Company ground water systems		

ITEM 8 — HORSEPOWER RATING OF POWER EQUIPMENT AT END OF 1954

The figures given should represent total horsepower rating of equipment in use or available for use at the end of 1954. Include emergency or stand-by equipment and equipment temporarily idle because in need of repairs; exclude only junk. Both stationary and mobile equipment should be included. Report horsepower rating indicated on name plates.

Kind of power equipment (a)	F1 Code	Total horsepower rating of— F2 Loading equipment[1] (b)	F3 Transportation equipment[2] (c)	F4* All other[3] (d)
A. Internal-combustion engines, steam engines and turbines, and other prime movers				
1. In highway-type equipment	11		hp.	
2. In all other equipment				
a. Driving generators	12	hp.	hp.	hp.
b. Not driving generators	13	hp.	hp.	hp.
B. Electric motors (1 horsepower and over)	14	hp.	hp.	hp.

[1] Include power units for shovels, dragline excavators, scrapers, and other mechanical loading equipment, both underground and surface.
[2] Include power units for locomotives, tractors, trucks, shaft hoists, and other haulage units.
[3] Include power units for churn drills, compressors, machine tools, pumps, mill and crushing plant machinery, etc.

ITEM 9 — CAPITAL EXPENDITURES FOR THIS ESTABLISHMENT DURING 1954 (Exclude expenditures for land and mineral rights.)

Expenditures refer to all costs actually incurred during 1954, whether on contract or by your own forces, which are chargeable to the fixed assets accounts of this establishment and which are of the type for which depreciation or depletion accounts are ordinarily maintained. Do not include cost of maintenance and repairs charged as current operating expense.

Item (a)	For Census Use Only A6, G1	A7, G2	A8	A9* X	Expenditures (omit cents) (b)
A. Development and exploration of mineral properties and new construction and major alterations of buildings and other fixed plants and structures.					
1. Development and exploration of mineral property				G3	$
2. Mill and crushing plant construction and major alterations				G4	$
3. Other construction and major alterations				G5	$
B. New machinery and equipment				G6	$
C. Used plant and used equipment acquired from others				G7	$
D. **Total** capital expenditures (Sum of A, B, and C)				G8*	$

Please continue form and sign certification on reverse (OVER)

Form MC 14A—Stone

ITEM 10 PRODUCTS AND SERVICES OF THIS ESTABLISHMENT DURING 1954

Report separately each product listed; do not combine product lines. Include all products which were physically shipped from this establishment during 1954, including minerals withdrawn from stockpiles and stone quarried and used by your company at other establishments. Include products shipped on consignment, whether or not sold at the end of 1954.

Report total values f. o. b. this mine, quarry, or mill. Include in the selling value royalty, if any, but exclude transportation charges to the purchaser or user. Include minerals prepared from materials mined at this establisbment, purchased, received from other mines of your company, or received for milling on a custom or toll basis. Estimates are acceptable wherever exact figures are not available.

Derived Unit Value.—This computation (Col. (e) divided by Col. (d)) is included as an aid to you and the Census Bureau in assuring that this part of your report bas been filled out correctly. Please examine tbe derived unit values to make sure that the correct unit of measure (Col. (b)) has been used, and that the quantities and values entered are consistent.

This item provides for summary figures on shipments and interplant transfers of stone products. The Bureau of Mines collects more detailed figures on stone products "sold or used" on Forms 6–1222A—Calcareous Marl; 6–1278A—Granite; 6–1279A—Limestone and Dolomite; 6–1280A—Marble; 6–1281A—Sandstone; 6–1282A—Slate; 6–1283A—Stone; and 6–1285A—Production of Stone by Railroads. The shipments and interplant transfers figures reported in Cols. (d) and (e) below should agree, in general, with the comparable figures for stone "sold or used" reported to the Bureau of Mines on the forms mentioned above. Unless you provide written objection in the "Remarks" section of this form, tbe Bureau of Mines will be permitted to compare the figures reported in this item witb tbe figures reported on the Bureau of Mines forms. If there sbould be significant differences between such figures reported to tbe Census Bureau and tbe Bureau of Mines, please explain under "Remarks."

Product (a)	K Indicate kind of stone, such as limestone, granite, slate, marble, basalt, sandstone, etc.	Unit of measure (b)	Total shipments and interplant transfers: Quantity (d)	Total shipments and interplant transfers: Value f. o. b. mine, quarry, or mill (omit cents) (e)	Census product code (j)	Derived unit value (Col. (e) divided by Col. (d))
A. Stone quarried, dressed, or crushed						
1. Dimension stone, except slate						
a. Rough stone for (Do not report here any stone included under shipments of dressed or crushed stone)						
(1) Construction (walls, foundations, bridges, etc.)		Short ton		$	141 2 12	$
(2) Architecture (buildings and other high-value construction work)		Cubic foot		$	141 2 22	$
(3) Monuments and mausoleums		Cubic foot		$	141 2 32	$
(4) Other rough stone (Specify principal use) _____		Cubic foot		$	141 2 99	$
b. Dressed stone for (Do not report bere any stone included under shipments of rough stone or crushed stone)						
(1) Construction (walls, foundations, bridges, etc.)		Cubic foot		$	3281	$
(2) Architecture (buildings and other bigh-value construction work)		Cubic foot		$	3281	$
(3) Monuments and mausoleums		Cubic foot		$	3281	$
(4) Curbing		Cubic foot		$	3281	$
(5) Other (Specify principal use)		Cubic foot		$	3281	$
2. Dimension slate						
a. Roofing slate	Slate	Square		$	32814 12	$
b. Mill stock (blocks, slabs, or pieces)	Slate	Sq. ft.		$	32814 14	$
c. Flagging	Slate	Sq. ft.		$	32814 16	$
3. Crushed, broken, or ground stone, except marl		Short ton		$	142 2 02	$
4. Calcareous marl	Marl	Short ton		$	14227 11	$
B. All other products						
1. Ready-mixed concrete				$	95132 71	
2. Other products (Specify kind and unit of measure)						
a. _____				$		$
b.				$		$
C. Amount received or due for work or services performed for other establishments (such as hauling, stripping, pumping, and shop work—Exclude amounts received for dressing, milling, or crushing stone on a custom or toll basis)				$	14818 43	
D. Sales of stone and other products purchased and resold without further processing				$	50990 11	
E. **Total** (Sum of A through D)				$		
F. Amount received for dressing, milling, or crushing stone on a custom or toll basis				$		

ITEM 11 MINERALS PREPARED AT THIS ESTABLISHMENT IN 1954

Item (a)	D1X Code	D3 Value (omit cents) (b)	D4 Rough blocks used to produce dressed stone (short tons) (c)	D5 Broken stone received for crushing, screening, or washing (short tons) (d)
A. Stone milled or crushed, by ownership of material (in value, include freight to mill)				
1. Stone from this mine or quarry	95			
2. Stone received from other mines or quarries of this company or purchased from others	97	$		
3. Stone received for milling or crushing on a custom or toll basis (Estimate value)	98	$		

B. Stone received from other establishments for milling or crushing, by source. If this report includes a mill or crushing plant serving other mines or quarries, list below the names and locations of supplying establishments and the kinds and amounts of stone received from each. Account for all stone reported in 11A2 and 11A3 above.

Name of supplying mine or quarry (a)	State (b)	County (c)	Name of operator (d)	Kind of stone received (e)	Receipts (short tons) (f)
1.					
2.					
3.					
4.					
5. **Total**					

ITEM 12 — NUMBER OF MECHANICAL-POWER LOADING AND EXCAVATING MACHINES, BY TYPE

The figures given in this inquiry should represent equipment in use or available for use at the end of 1954. Include emergency or stand-by equipment and equipment temporarily idle because in need of repairs; exclude only junk. The horsepower rating of all equipment reported in this inquiry should be summarized on the appropriate lines of Item 8, Col. (b).

Type of machine (a)	S1 Code	S2 Total number of machines (b)	Number of machines, by kind of power used: S3 Steam (c)	S4 Electric and Diesel-electric (d)	Internal-combustion engines: S5 Diesel (e)	S6 Gasoline and other (f)	Number of machines, by dipper or bucket capacity in cubic yards: S7 Less than 3 (g)	S8 3–5 inclusive (h)	S9 6–12 inclusive (i)	S10* More than 12 (j)
A. At surface operations										
1. Power shovels	01									
2. Dragline excavators	02									
							Scraper loaders, by rated horsepower: Less than 10	10–25 inclusive	25–100 inclusive	More than 100
3. Scraper loaders	03									
4. Cranes and quarry hoists	05									
5. Clamshell and orange-peel loaders	04									
6. Other (Specify)	19									
B. In underground operations										
1. Shovel loaders										
a. Requiring a minimum working height of more than 8 feet	21		Compressed air							
b. Requiring a minimum working height of 8 feet or less	22									
2. Scraper loaders	23									
3. Other (Specify)	39									

ITEM 13

Not applicable to these industries

REMARKS

ITEM 14 — CHECKS TO ASSURE A COMPLETE AND ACCURATE REPORT

The Census Bureau reviews your report for omissions, inconsistencies, and unusual ratios. To save you future correspondence about these problems, please make the following checks before returning your report:

(1) Review the report carefully to see that no items are omitted.
(2) Copy the figures requested in Columns I and II below; analyze your results in Column III below.
(3) Correct your report for any errors you find; explain unusual figures in "Remarks" section.

Copy in Column I the figures reported in—	Column I	Copy in Column II the figures reported in—	Column II	Divide Column I by Column II; show result in Column III	Column III
Item 4A, Col. (o) (Production worker wages)	$	Item 5C (Total man-hours)		Average hourly wages per worker	$
Item 5C (Total man-hours)		Item 4A, Col. (n) (Average production workers)		Hours worked per year per worker	
Item 4C, Col. (o) (Total salaries and wages)	$	Item 4C, Col. (n) (Average total employment)		Average annual earnings per employee	$
Item 4C, Col. (o), plus Item 6G plus Item 11A, Col. (b) (Total salaries and wages, cost of supplies, etc., and value of minerals received for preparation)	$	Item 10E plus Item 9D (Value of shipments and capital expenditures)	$	Principal expenses per dollar of shipments and capital expenditures	¢

ITEM 15 — CERTIFICATION

Name and address of person who should be contacted if questions arise regarding this report

Telephone No.

This report is substantially accurate and covers the period from _____ to _____

Date _____ Title _____ Signature of authorized person _____

APPENDIX A

INST.
MC-14I

DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON 25

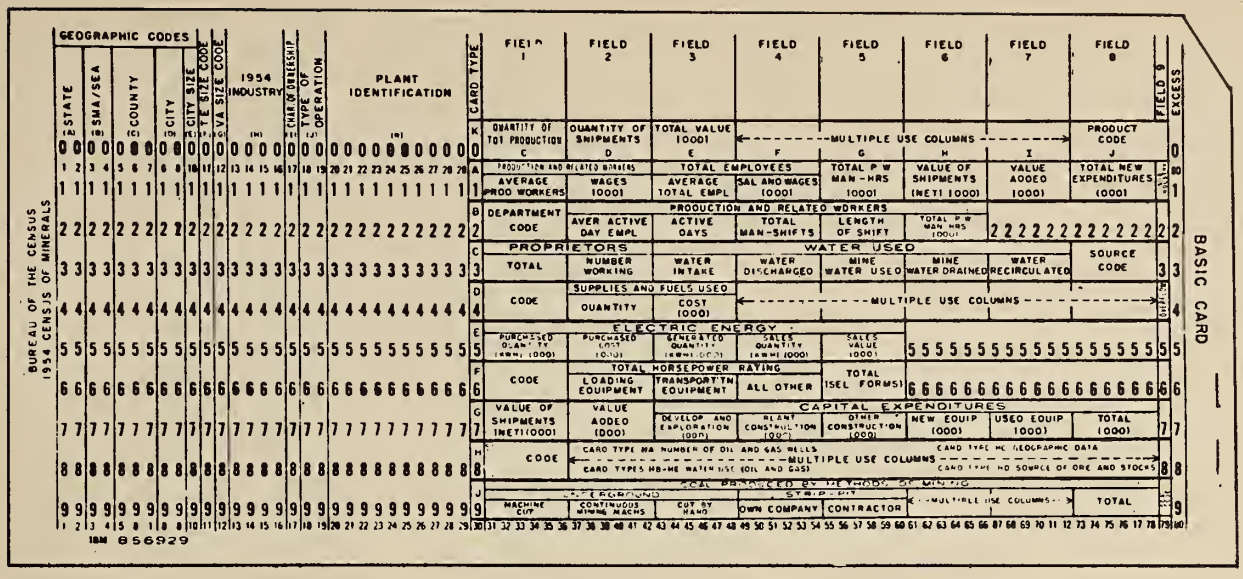
1954 CENSUS OF MINERAL INDUSTRIES

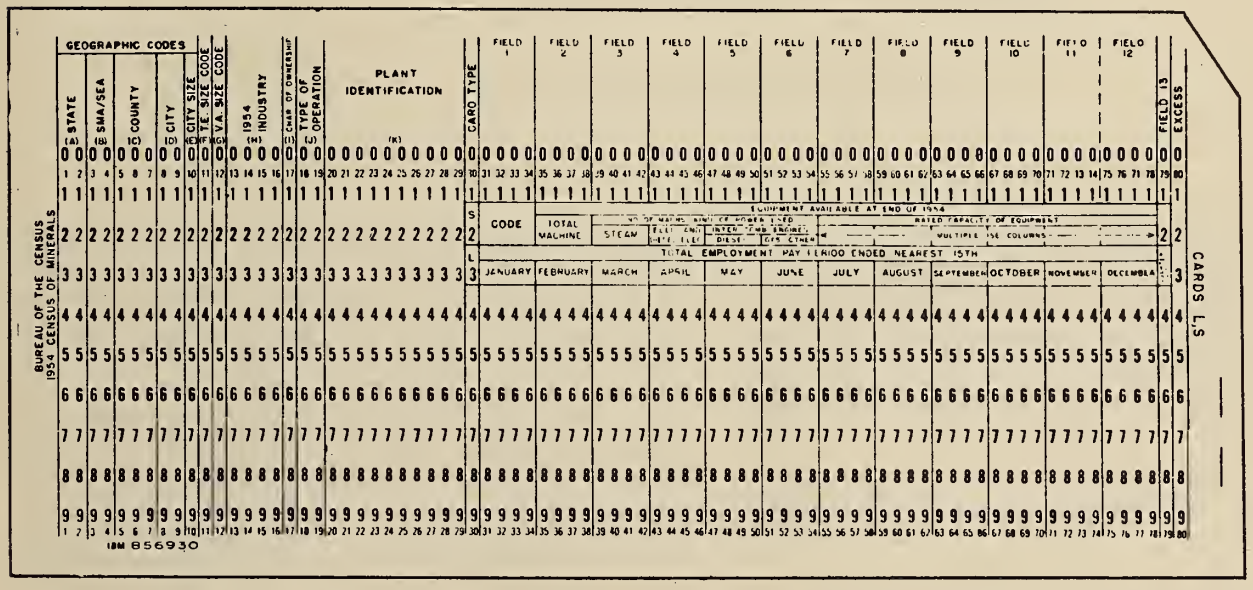
SPECIAL INSTRUCTIONS FOR COMPANIES OPERATING STONE QUARRIES IN CONJUNCTION WITH THE PRODUCTION OF CEMENT, LIME, OR DRESSED DIMENSION STONE AT THE SAME LOCATION

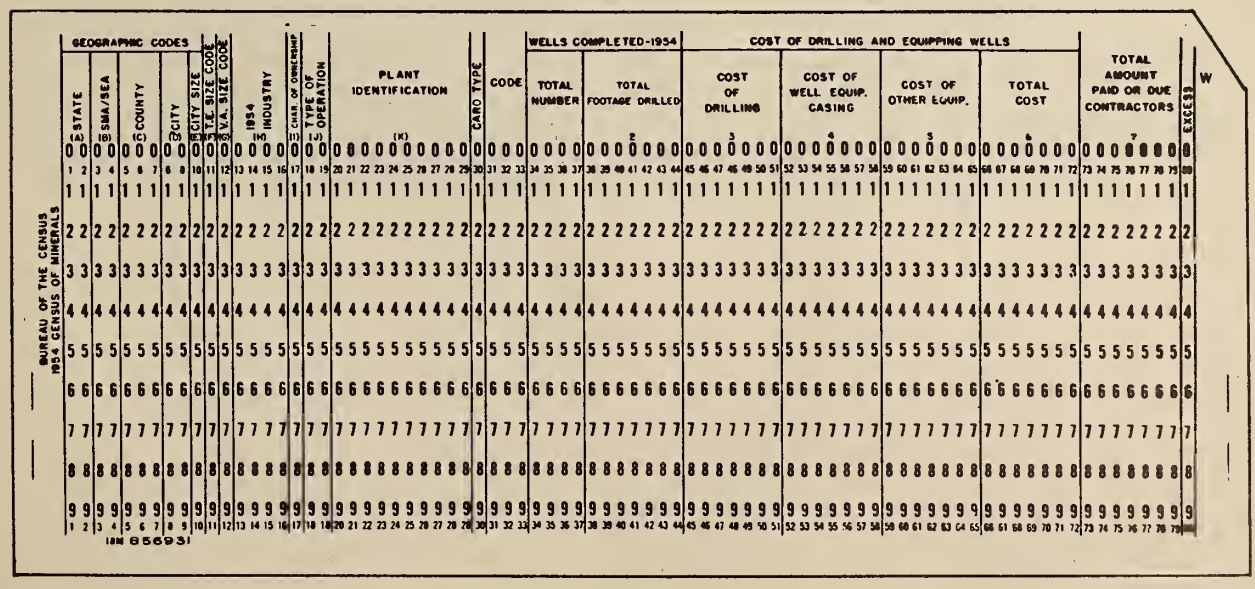
Companies which operate stone quarries in conjunction with the production of cement, lime, or dressed dimension stone may have received the 1954 Census of Mineral Industries Forms MC-14A, Stone, or MC-14D, Clay, Ceramic, and Refractory Minerals, to cover their stone quarrying or clay mining operations, in addition to the 1954 Census of Manufactures Forms MC-32D, Cement and Lime (for their cement- or lime-manufacturing activities), or MC-32L, Cut Stone and Stone Products (for their stone-dressing activities).

Companies which operate a stone quarry and a dimension-stone dressing plant at the same location should report these combined operations on Form MC-14A, Stone. In this case, do not complete Form MC-32L, Cut Stone and Stone Products, but return it with the completed Form MC-14A, Stone, with the following notation written across it: "Combined operations reported on Form MC-14A."

Likewise, if a company operates a limestone quarry or clay pit and a cement or lime plant at the same location, and separate records for these operations are not maintained, a combined report should be submitted on Form MC-32D, Cement and Lime. Item 20 of Form MC-32D, Mining Operations Included in This Report, should show separately the specified data relating to both the stone-quarrying and clay-mining operations. Form MC-14A, Stone, and MC-14D, Clay, Ceramic, and Refractory Minerals, should be returned with the completed Form MC-32D, Cement and Lime, with the following notation written across each form: "Combined operations reported on Form MC-32D."


BUREAU OF THE CENSUS
1954 CENSUS OF MINERALS
BASIC CARD
GEOGRAPHIC CODES
STATE (A)
SMA/SEA (B)
COUNTY (C)
CITY (D)
CITY SIZE (E)
TE. SIZE CODE (F)
VA. SIZE CODE (G)
1954 INDUSTRY (H)
CHAR. OF OWNERSHIP (I)
TYPE OF OPERATION (J)
PLANT IDENTIFICATION (K)
CARD TYPE
FIELD 1
FIELD 2
FIELD 3
FIELD 4
FIELD 5
FIELD 6
FIELD 7
FIELD 8
FIELD 9 EXCESS
QUANTITY OF TOT PRODUCTION
QUANTITY OF SHIPMENTS
TOTAL VALUE (000)
MULTIPLE USE COLUMNS
PRODUCT CODE
PRODUCTION AND RELATED WORKERS
TOTAL EMPLOYEES
TOTAL P W MAN-HRS
VALUE OF SHIPMENTS (NET) (000)
VALUE ADDED (000)
TOTAL NEW EXPENDITURES (000)
AVERAGE PROD WORKERS
WAGES (000)
AVERAGE TOTAL EMPL
SAL AND WAGES (000)
DEPARTMENT CODE
PRODUCTION AND RELATED WORKERS
AVER ACTIVE DAY EMPL
ACTIVE DAYS
TOTAL MAN-SHIFTS
LENGTH OF SHIFT
TOTAL P W MAN HRS (000)
PROPRIETORS
WATER USED
TOTAL
NUMBER WORKING
WATER INTAKE
WATER DISCHARGED
MINE WATER USED
MINE WATER DRAINED
WATER RECIRCULATED
SOURCE CODE
SUPPLIES AND FUELS USED
CODE
QUANTITY
COST (000)
ELECTRIC ENERGY
PURCHASED QUANTITY (MWH) (000)
PURCHASED COST (000)
GENERATED QUANTITY (MWH) (000)
SALES QUANTITY (MWH) (000)
SALES VALUE (000)
TOTAL HORSEPOWER RATING
LOADING EQUIPMENT
TRANSPORTTN EQUIPMENT
ALL OTHER
TOTAL (SEL FORMS)
VALUE OF SHIPMENTS (NET) (000)
VALUE ADDED (000)
CAPITAL EXPENDITURES
DEVELOP AND EXPLORATION (000)
PLANT CONSTRUCTION (000)
OTHER CONSTRUCTION (000)
NEW EQUIP (000)
USED EQUIP (000)
TOTAL (000)
CODE
CARD TYPE MA NUMBER OF OIL AND GAS WELLS
CARD TYPE MC GEOGRAPHIC DATA
CARD TYPES MB-ME WATER USE (OIL AND GAS)
CARD TYPE MD SOURCE OF ORE AND STOCKS
COAL PRODUCED BY METHOD OF MINING
UNDERGROUND
STRIP - CUT
MACHINE CUT
CONTINUOUS MINING MACHS
CUT BY HAND
OWN COMPANY
CONTRACTOR
TOTAL
IBM 856929


BUREAU OF THE CENSUS
1954 CENSUS OF MINERALS
CARDS L,S
GEOGRAPHIC CODES
STATE (A)
SMA/SEA (B)
COUNTY (C)
CITY (D)
CITY SIZE (E)
TE. SIZE CODE (F)
VA. SIZE CODE (G)
1954 INDUSTRY (H)
CHAR. OF OWNERSHIP (I)
TYPE OF OPERATION (J)
PLANT IDENTIFICATION (K)
CARD TYPE
FIELD 1
FIELD 2
FIELD 3
FIELD 4
FIELD 5
FIELD 6
FIELD 7
FIELD 8
FIELD 9
FIELD 10
FIELD 11
FIELD 12
FIELD 13 EXCESS
CODE
TOTAL MACHINE
EQUIPMENT AVAILABLE AT END OF 1954
NO OF MACHS KIND OF POWER USED
RATED CAPACITY OF EQUIPMENT
STEAM
ELEC (INCL STEAM ELEC)
INTERNAL COMB ENGINES
GAS
DIESEL
GAS (OTHER)
MULTIPLE USE COLUMNS
TOTAL EMPLOYMENT PAY PERIOD ENDED NEAREST 15TH
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
IBM 856930


BUREAU OF THE CENSUS
1954 CENSUS OF MINERALS
GEOGRAPHIC CODES
STATE (A)
SMA/SEA (B)
COUNTY (C)
CITY (D)
CITY SIZE (E)
TE. SIZE CODE (F)
VA. SIZE CODE (G)
1954 INDUSTRY (H)
CHAR. OF OWNERSHIP (I)
TYPE OF OPERATION (J)
PLANT IDENTIFICATION (K)
CARD TYPE
CODE
WELLS COMPLETED-1954
TOTAL NUMBER
TOTAL FOOTAGE DRILLED
COST OF DRILLING AND EQUIPPING WELLS
COST OF DRILLING
COST OF WELL EQUIP. CASING
COST OF OTHER EQUIP.
TOTAL COST
TOTAL AMOUNT PAID OR DUE CONTRACTORS
EXCESS
W
IBM 856931

Appendix B

Provisions of Law Relating to 1954 Census of Mineral Industries

(From Title 13 United States Code)

SECTION 131. The Secretary shall take, compile, and publish censuses of manufactures, of mineral industries, and of other businesses, including the distributive trades, service establishments, and transportation (exclusive of means of transportation for which statistics are required by law to be filed with, and are compiled and published by, a designated regulatory body), in the year 1954 and every fifth year thereafter, and each such census shall relate to the year immediately preceding the taking thereof: Provided, That the censuses of manufactures, of mineral industries, and of other businesses, including the distributive trades and service establishments, directed to be taken in the year 1954 relating to the year 1953, shall be taken instead in the year 1955 relating to year 1954. The censuses provided for in this section shall include the United States and its Territories and such Possessions as the Secretary may determine.

SECTION 224. Whoever, being the owner, official, agent, person in charge, or assistant to the person in charge, of any company, business, institution, establishment, religious body, or organization of any nature whatsoever, neglects or refuses, when requested by the Secretary or other authorized officer or employee of the Department of Commerce or bureau or agency thereof, whether such request be made by registered mail, by telegraph, by visiting representative, or by one or more of these methods, to answer completely and correctly to the best of his knowledge all questions relating to his company, business, institution, establishment, religious body, or other organization, or to records or statistics in his official custody, contained on any census or other schedule prepared and submitted to him under the authority of this title, shall be fined not more than $500 or imprisoned not more than sixty days, or both; and if he willfully gives a false answer to any such question, he shall be fined not more than $10,000 or imprisoned not more than one year, or both.

SECTION 9. (a) Neither the Secretary, nor any other officer or employee of the Department of Commerce or bureau or agency thereof, may . . . .

(1) use the information furnished under the provisions of this title for any purpose other than the statistical purposes for which it is supplied; or

(2) make any publication whereby the data furnished by any particular establishment or individual under this title can be identified; or

(3) permit anyone other than the sworn officers and employees of the Department or bureau or agency thereof to examine the individual reports.

List of Corrections

This volume has been prepared by assembling and binding portions of previously printed Subject and Area Bulletins. This publication plan was adopted to reduce publication costs and to expedite issue of the volume. The corrections appearing below represent needed changes which were discovered after printing the individual chapters and which could only have been made in this volume by reprinting the specified portions.

Page no.	Table	Item	Columns	Change	
				From--	To--
A-5	1	Number of preparation plants	3	1,503	2,618
A-11	3	Arkansas (line 41)	16	69	72
		Oklahoma (line 43)	4	(5)	[4]17,576
			5	[4] [5]126,024	[4]108,448
		California (line 57)	16	103	109
A-12	4	All mineral operations: Including crude petroleum and natural gas extraction 1919 (line 3)	3	1,503	2,618
		Metal mining: 1939 (line 8)	4	517,375	517,377
		1929 (line 9)	7	9,802	9,813
		1919 (line 10)	3	634	637
A-13	4	Metal mining: 1939 (line 8)	10	14,775	14,728
			14	14,647	14,628
		1929 (line 9)	2	27,647	27,484
			12	1,696	1,736
			14	24,623	24,727
		1919 (line 10)	12	1,330	1,379
A-16	4	Nonmetallic minerals (except fuels) mining: 1939 (line 7)	6	81,306	81,287
		1929 (line 8)	7	11,473	11,462
A-17	4	Nonmetallic minerals (except fuels) mining: 1939 (line 7)	1	83,374	83,014
			12	2,311	2,330
			14	20,289	20,200
		1929 (line 8)	1	114,691	116,691
			2	31,678	31,608
A-23	5	Middle Atlantic (line 17)	13	19,524	19,260
		New York (line 19)	13	3,432	3,168
		East North Central (line 25)	4	163,828	161,210
			5	22,129	21,880
			13	16,633	16,597
		Indiana (line 29)	5	2,636	2,387
		Illinois (line 31)	4	64,137	61,554
		Michigan (line 33)	13	3,705	3,669
		Wisconsin (line 35)	4	9,727	9,692
		West North Central (line 37)	13	18,697	18,841
		North Dakota (line 45)	13	745	890
		Delaware, Maryland, and the District of Columbia (line 55)	13	436	476
A-25	5	West South Central (line 1)	4	839,553	828,580
		Arkansas (line 13)	13	3,859	3,793
		Louisiana (line 15)	4	215,291	203,038
		Oklahoma (line 17)	13	31,291	31,302
		Texas (line 19)	4	497,791	499,071
		Mountain (line 21)	2	303,088	303,275
		Montana (line 23)	13	2,525	2,504
		Colorado (line 29)	7	40,815	40,761
		Utah (line 35)	2	43,260	43,447
			4	33,327	33,425
		California (line 45)	13	38,349	38,427
101-3	1	Horsepower rating of electric motors driven by energy generated at establishment	1	[13]79	(15)
			4	79	(15)
101-4	2	Horsepower rating of electric motors driven by energy generated at establishment (line 44)	1	[10]79	(9)
			2, 3, 4	79	(9)
101-11	6	Alabama, total	8	14,392	13,996
		Nonmetallic minerals (except fuels) mining, total	8	1,565	1,169
		Stone (dimension and crushed and broken)	8	1,565	1,169
102-7	2	Open-pit (line 17)	10	94	103
		Surface (line 18)	10	9	(NA)
104-7	2	Underground (line 16)	11	10	170
		Open-pit (line 17)	11	170	10
106-3	1	Horsepower per production worker	4	81	72
109-7	2	Number of preparation plants (line 5)	1	...	1
111-5	2	Value added in mining (line 8)	4	[4]5,078	[4]5,128
111-6	3	Ferro-alloy ores, metal mining contract services, and miscellaneous metal ores	3	[1]5,078	[1]5,128
111-11	6	Ferro-alloy and other metal ores	2	[5]5,078	[5]5,128
112-3	1	Minerals received for preparation	1	21,221	23,804
		Supplies	1	64,137	61,554
112-3	1	Minerals received for preparation	6	18,638	21,221
		Supplies	6	37,267	34,684

Page no.	Table	Item	Columns	Change	
				From--	To--
112-4	2	Surface (mine shops, yards, etc.) (line 18)	1, 2	7,683	[12]951
		At preparation plants (line 19)	1, 2	5,736	[12]12,468
		Principal expenses designated below, total (line 22)	9	[5]5,070	[5]2,487
		Minerals received for preparation and Supplies (lines 25 and 26)	9	[5]3,447	[5]864
		Minerals received for preparation (line 25)	1, 2	21,221	23,804
		Supplies (line 26)	1	64,137	61,554
			2	63,191	60,608
112-5	2	Add footnote 12 as follows: [12]For the bituminous coal industry the combined figure is included with "At preparation plants" since 83 percent of the coal shipped was mechanically cleaned.			
114-5	1	Number of preparation plants	1	263	228
			4	128	122
114-6	2	Number of preparation plants (line 5)	1	263	228
			4	125	116
			7	24	2
			9	10	6
		Open-pit (line 17)	1	2,988	3,089
			2	2,227	2,328
			6	601	702
		Surface (mine shops, yards, etc.) (line 18)	1	406	305
			2	406	305
			6	101	(NA)
115-3	1	Number of operating companies	1	1,647	1,638
		Number of preparation plants	1	212	198
			6	197	183
115-4	2	Number of preparation plants (line 5)	1	209	198
115-6	2	Number of preparation plants (line 5)	1	185	174
115-7	2	Number of preparation plants (line 5)	2	70	63
			7	7	3
117-3	1	Number of preparation plants	1	131	115
117-4	2	Number of preparation plants (line 5)	1	131	115
117-5	2	Number of preparation plants (line 5)	4	79	63
			7	18	4
119-4	1	Energy used	1	[12]410	[12]476
			4	[12]280	195
119-6	2	Energy used (line 45)	1	[6]410	[6]476
			2	410	476
			5	[6]376	[6]442
			6	376	442
119-7	2	Energy used (line 45)	3	30	20
			6	191	267
122-3	Map	Rank among States: Employment		12	11
124-3	1	Horsepower rating of electric motors driven by energy generated at establishment	1	[11]1,473	[11]1
			4	1,353	1
124-4	2	Underground (line 16)	1	4,358	4,766
		Open-pit (line 17)	1	4,701	4,481
		Surface (mine shops, yards, etc.) (line 18)	1	1,927	1,270
			2	1,739	1,270
		At preparation plants (line 19)	1	4,383	4,852
			2	3,739	4,208
		Horsepower rating of electric motors driven by energy generated at establishment (line 44)	1	[10]1,473	[10]1
			2	1,473	1
124-5	2	Underground (line 16)	1	363	771
			5	316	724
		Open-pit (line 17)	1	4,025	3,805
			5	2,448	2,040
			9	310	394
			11	49	153
		Surface (line 18)	1	502	314
			9	91	7
			11	104	...
		Horsepower rating of electric motors driven by energy generated at establishment (line 44)	1	[10]1,473	[10]1
			2	1,473	1
			5, 6	1,167	1
			8	120	([9])
			13	186	([9])
125-3	1	Horsepower rating of electric motors driven by energy generated at establishment	1, 6	[14]239	[14]1
125-4	2	Horsepower rating of electric motors driven by energy generated at establishment	1, 2	239	1
125-5	2	Horsepower rating of electric motors driven by energy generated at establishment	6, 7	238	([12])
125-14	5	Montana, all mineral operations: Mineral industries only	10	...	2
			11	...	1
			12	...	1
129-3	Map	Rank among States: Employment		31	30
129-6	2	Open-pit (line 17)	1	1,975	2,150
			2	1,847	2,022
		Surface (line 18)	1, 2	743	568

Page no.	Table	Item	Columns	Change	
				From--	To--
129-7	2	Open pit (line 17)	4	341	478
			5	27	43
			6	128	150
		Surface (line 18)	4	137	(NA)
			5	16	(NA)
			6	22	(NA)
129-8	3	Zinc ores, metal mining contract services, and uranium-radium-vanadium ores	3	4,280	[3]4,304
		Add footnote 3: See table 1, footnote 6.			
131-3	1	Number of establishments	3	441	424
		Energy used	1	[12]3,268	[12]3,168
			3	3,107	2,840
			8	[12]2,745	[12]2,677
		Coal	1	[12]230	[12]215
			3	225	210
			8	[12]230	[12]215
		Fuel oils	3	306	204
			8	[12]246	[12]266
		Electric energy purchased	3	283	304
131-4	2	Energy used (line 45)	1	[8]3,268	[8]3,168
			2	3,256	3,158
			9	839	741
			10	829	731
		Coal (line 47)	1	[8]230	[8]215
			2	230	215
			9	[8]28	[8]13
			10	28	13
131-5	2	Energy used (line 45)	12	[8]381	[8]83
		Coal (line 47)	12	[8]18	[8]3
132-7	2	Open-pit (line 17)	6	273	289
		Surface (line 18)	7	16	(NA)
133-3	1	Energy used	1	745	890
		Gas[11]	1	1,057	1,249
		Electric energy generated and used	1	([10])	3
133-4	2	Energy used	1	745	890
			2	600	659
			6	...	59
			7	145	231
		Produced and used for fuel:			
		Natural gas	1, 2	623	815
			6	...	192
		Electric energy generated and used	1, 2	([7])	3
			6	...	3
134-4	2	Underground (line 16)	1	8,450	8,676
		Open-pit (line 17)	1	13,285	12,977
		Surface (mine shops, yards, etc.) (line 18)	1	[9]5,609	[9]5,691
134-5	2	Underground (line 16)	1	499	725
			5	408	508
			16	...	126
		Open-pit (line 17)	1	7,263	7,037
			5	3,082	2,982
			16	187	61
135-6	2	Value added in mining	6	[2]282	[2]291
137-3	1	Number of preparation plants	1	644	617
			6	633	606
137-7	2	Underground (line 16)	1	1,236	1,343
		Open-pit (line 17)	1	4,743	4,636
138-3	Map	Rank among States: Employment		49	47
		Value of shipments		49	47
139-4	2	Number of preparation plants (line 5)	2	41	48
		Open-pit (line 17)	5	177	212
		Surface (line 18)	5	35	(NA)
140-5	1	Number of mines and quarries	1	181	177
140-6	2	Value added in mining (line 8)	3	[5]15,494	[5]15,570
140-8	3	Ferro-alloy ores, except vanadium; Metal mining contract services; and Miscellaneous metal ores	3	[2]55	[2]131
145-3	1	Horsepower rating of electric motors driven by energy generated at establishment	1	[10]122	[10]7
			4	122	7
145-4	2	Horsepower rating of electric motors driven by energy generated at establishment (line 44)	1	[8]122	[8]7
			2	122	7
			3	115	([9])
147-4	2	Underground (line 16)	1	81,056	81,474
		Open-pit (line 17)	1	5,528	5,110
147-5	2	Underground (line 16)	5	286	704
			7	285	703
		Open-pit (line 17)	5	1,864	1,446
			7	1,122	704
148-3	Map	Rank among States: Employment		32	31

LIST OF CORRECTIONS

Page no.	Table	Item	Columns	Change	
				From--	To--
148-5	1	Minerals received for preparation	1, 4	734	769
		Supplies	1	[10]9,727	[10]9,692
			4	8,498	8,463
		Horsepower rating of electric motors driven by energy generated at establishment	1	[11]25	([12])
		Electric energy generated and used	1	[11]12	([12])
148-6	2	Horsepower rating of electric motors dirven by energy generated at establishment (line 43)	1, 4	[4]25	([5])
			2, 5	25	([5])
		Electric energy generated and used (line 49)	1, 4	[4]12	([5])
			2, 5	12	([5])
148-7	2	Horsepower rating of electric motors driven by energy generated at establishment (line 43)	8	25	([5])
		Electric energy generated and used (line 49)	8	12	([5])

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